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Analyses of Natural Gases, 1998–2001

B. D. Gage
Bureau of Land Management

D. L. Driskill
Bureau of Land Management

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Technical Note 412

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By B.D.Gage
Petroleum Engineer
Bureau of Land Management
Amarillo Field Office
Amarillo, Texas

D.L. Driskill
Geologist
Bureau of Land Management
Amarillo Field Office
Amarillo, Texas

United States Department of the Interior
Bureau of Land Management

Production services provided by:

Information and Communications Staff
Peter Doran, Chief (303-236-1601)

Ethel Coontz: Layout and Design
Kathy Rohling: Editing

Lee Barkow, Director
National Science & Technology Center
P.O. Box 25047
Denver, Colorado 80225-0047

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Contents

Abstract

Technical Note 412 contains analyses and related source data for 311 natural gas samples from 13 States. Of the total samples, 309 were collected during calendar years 1998 through 2001. The analyses were made using mass spectroscopy and gas chromatography. None of the analyses have been published previously in other analyses reports. All samples were obtained and analyzed as part of the United States Department of the Interior's Bureau of Land Management investigations of the occurrences of helium in natural gases of countries with free-market economies. The results of these investigations are published periodically to make the information available to members of the helium and petroleum industries and to the general public.

Introduction

Bureau of Land Management Technical Note 412, *Analyses of Natural Gases, 1998–2001*, contains analyses and related source data for 311 natural gas samples from 13 States. Of the total samples, 309 were collected during calendar years 1998 through 2001. The remaining two were collected earlier, but releases granting permission to publish them were received at a later date. None of these analyses have been published previously in other analyses reports.

The analyses were made using mass spectroscopy and gas chromatography. All samples were obtained and analyzed as part of the Bureau of Land Management investigations of the occurrences of helium in natural gases of countries with free-market economies. This helium survey program has been conducted since 1917. The results are published periodically to make the information available to members of the helium and petroleum industries and to the general public.

Forty-two publications have presented the results of 16,058 gas analyses performed through 1997. These publications are referenced at the end of this report in the section "Previous Publications in the Helium Survey Series."

The first three bulletins (1–3)[1] contain analyses and related source data on 5,218 gas samples collected from 1917 through 1960. These bulletins have been supplemented periodically by information circulars and technical notes (4–17, 19–24, 26–30, 32–36, 38–42) containing 10,840 analyses of samples collected since 1960.

In 1976, a compilation of the analyses made prior to 1975 was prepared by the United States Bureau of Mines (USBM) and published by the National Technical Information Service of the United States Department of Commerce (18). The 1976 compilation contains 10,562 analyses of gas samples from gas and oil wells and natural gas pipelines in 37 States and 23 foreign countries.

Three other compilations of analyses have been published (25, 31, 37) by the USBM. The first of these was published in 1982 and contained analyses performed prior to 1981. The 1982 publication contains 12,554 analyses of gas samples from gas and oil wells and natural gas pipelines in 39 States and 24 foreign countries and includes the analyses from the 1976 publication (25). The second of these compilations was published in 1987 and contains 14,242 analyses performed prior to 1986. The samples were taken from gas and oil wells and natural gas pipelines in 40 States and 24 foreign countries (31). In 1991, a compilation of analyses was completed as a supplement to the 1987 publication and contains all analyses published from 1986

[1]The numbers in parentheses refer to items in the list of previous publications at the end of this report.

through 1990. The 1991 publication contains 920 samples from gas and oil wells and natural gas pipelines in 26 States and 2 foreign countries (37).

In addition to appearing in the publications, all analyses and related information published through 1997 are available on CD-ROM from the National Technical Information Service (NTIS) in Springfield, Virginia (1-800-553-NTIS). Orders should refer to Bureau of Land Management CD-ROM PB98-502206. The update to the 1997 CD-ROM, which will include the 1998–2001 analyses, should be available for purchase around the time this report is published.

The helium survey program is conducted by soliciting natural gas samples from throughout the United States and other countries with free-market economies. The helium survey, in its present scope, would not be possible without the assistance of the helium and petroleum industries, State and Federal agencies, and the many individuals engaged in oil and gas exploration and production.

Tables

Tables 1 and 2—the main focus of this technical note—include the results of analyses and related source data from the gas samples. This information is divided into two groups. Table 1 contains information on samples from gas and oil wells in the United States. Table 2 contains information on samples from natural gas pipelines in the United States. The following chart indicates the sources of the samples listed in these tables. All components of the analyses in the tables are reported to the nearest 0.1percent, except helium, which is reported to the nearest 0.01percent. The word "trace" is used to denote quantities of helium of less than 0.005 percent and quantities of other components of less than 0.05 percent.

Source	Number of Samples	Table(s)	Source	Number of Samples	Table(s)
Arizona	1	1	Oregon	1	1
Arkansas	2	1	Pennsylvania	2	1
Colorado	35	1,2	Tennessee	1	1
Kansas	77	1	Texas	20	1
New Mexico	126	1	Utah	2	1
Ohio	2	1	Wyoming	3	1
Oklahoma	39	1			

Geologic Provinces of the United States

Tables 1 and 2 also include geologic province codes so each sample source can be located within a specific geologic province as defined by the Committee on Statistics of Drilling of the American Association of Petroleum Geologists. The provinces and their associated codes are provided in the list that follows and are also illustrated in Figure 1[2]. They are delineated by political boundaries for convenience and for accommodation of the data processing equipment. Because not all of the provinces shown are gas-producing areas, many of the codes are not used in this publication. In addition, since State or Federal ownership is not always known in offshore areas, only one code is used for each State. Due to the lack of information on the location of wells in Alaska, only one code (972) is used for all wells.

[2]The list and Figure 1 are taken from the article cited as: Meyer, R.F. 1970. Geologic provinces code map for computer use: American Association of Petroleum Geologists Bulletin, v. 54, n. 7, p.1301-1305.

Code	Province
100	New England Province
110	Adirondack Uplift
120	Atlantic Coast Basin
130	South Georgia-North Florida Sedimentary Province
140	South Florida Province
150	Piedmont-Blue Ridge Province
160	Appalachian Basin
200	Black Warrior Basin
210	Mid-Gulf Coast Basin
220	Gulf Coast Basin
230	Arkla Basin
240	Desha Basin
250	Upper Mississippi Embayment
260	East Texas Basin
300	Cincinnati Arch
305	Michigan Basin
310	Wisconsin Arch
315	Illinois Basin
320	Sioux Uplift
325	Iowa Shelf
330	Lincoln Anticline
335	Forest City Basin
340	Ozark Uplift
345	Arkoma Basin
350	South Oklahoma Folded Belt Province
355	Chautauqua Platform
360	Anadarko Basin
365	Cherokee Basin
370	Nemaha Anticline
375	Sedgwick Basin
380	Salina Basin
385	Central Kansas Uplift
390	Chadron Arch
395	Williston Basin
400	Ouachita Tectonic Belt Province
405	Kerr Basin
410	Llano Uplift
415	Strawn Basin

Code	Province
420	Fort Worth Syncline
425	Bend Arch
430	Permian Basin
435	Palo Duro Basin
440	Amarillo Arch
445	Sierra Grande Uplift
450	Las Animas Arch
455	Las Vegas-Raton Basin
460	Estancia Basin
465	Orogrande Basin
470	Pedregosa Basin
475	Basin-and-Range Province
500	Sweetgrass Arch
505	Montana Folded Belt Province
510	Central Montana Uplift
515	Powder River Basin
520	Big Horn Basin
525	Yellowstone Province
530	Wind River Basin
535	Green River Basin
540	Denver Basin
545	North Park Basin
550	South Park Basin
555	Eagle Basin
560	San Luis Basin
565	San Juan Mountain Province
570	Uinta Uplift
575	Uinta Basin
580	San Juan Basin
585	Paradox Basin
590	Black Mesa Basin
595	Piceance Basin
600	Northern Cascade Range-Okanagan Province
605	Eastern Columbia Basin
610	Idaho Mountains Province
615	Snake River Basin
620	Southern Oregon Basin
625	Great Basin Province

Code	Province
630	Wasatch Uplift
635	Plateau Sedimentary Province
640	Mojave Basin
645	Salton Basin
650	Sierra Nevada Province
700	Bellingham Basin
705	Puget Sound Province
710	Western Columbia Basin
715	Klamath Mountains Province
720	Eel River Basin
725	Northern Coast Range Province
730	Sacramento Basin
735	Santa Cruz Basin
740	Coastal Basins
745	San Joaquin Basin
750	Santa Maria Basin
755	Ventura Basin
760	Los Angeles Basin
765	Capistrano Basin
800	Heceta Island Area
805	Keku Islands Area
810	Gulf of Alaska Basin
815	Copper River Basin
820	Cook Inlet Basin
830	Kandik Province
835	Kobuk Province
840	Koyukuk Province
845	Bristol Bay Basin
850	Bethel Basin
855	Norton Basin
860	Selawik Basin
863	Yukon Flats Basin
865	Lower Tanana Basin
867	Middle Tanana Basin
870	Upper Tanana Basin
873	Galena Basin
875	Innoko Basin
877	Minchumina Basin

Code	Province
880	Holitna Basin
885	Arctic Foothills Province
890	Arctic Slope Basin
900	Maine Atlantic offshore–general
901	Maine Atlantic offshore–State
902	Maine Atlantic offshore–Federal
903	New Hampshire Atlantic offshore–general
904	New Hampshire Atlantic offshore–State
905	New Hampshire Atlantic offshore–Federal
906	Massachusetts Atlantic offshore–general
907	Massachusetts Atlantic offshore–State
908	Massachusetts Atlantic offshore–Federal
909	Rhode Island Atlantic offshore–general
910	Rhode Island Atlantic offshore–State
911	Rhode Island Atlantic offshore–Federal
912	Connecticut Atlantic off shore–general
913	Connecticut Atlantic offshore–State
914	Connecticut Atlantic offshore–Federal
915	New York Atlantic offshore–general
916	New York Atlantic offshore–State
917	New York Atlantic offshore–Federal
918	New Jersey Atlantic offshore–general
919	New Jersey Atlantic offshore–State
920	New Jersey Atlantic offshore–Federal
921	Delaware Atlantic offshore–general
922	Delaware Atlantic offshore–State
923	Delaware Atlantic offshore–Federal
924	Maryland Atlantic offshore–general
925	Maryland Atlantic offshore–State
926	Maryland Atlantic offshore–Federal
927	Virginia Atlantic offshore–general
928	Virginia Atlantic offshore–State
929	Virginia Atlantic offshore–Federal
930	North Carolina Atlantic offshore–general
931	North Carolina Atlantic offshore–State
932	North Carolina Atlantic offshore–Federal
933	South Carolina Atlantic offshore–general
934	South Carolina Atlantic offshore–State

Code	Province
935	South Carolina Atlantic offshore–Federal
936	Georgia Atlantic offshore–general
937	Georgia Atlantic offshore–State
938	Georgia Atlantic offshore–Federal
939	Florida Atlantic offshore–general
940	Florida Atlantic offshore–State
941	Florida Atlantic offshore–Federal
942	Florida Gulf of Mexico offshore–general
943	Florida Gulf of Mexico offshore–State
944	Florida Gulf of Mexico offshore–Federal
945	Alabama Gulf of Mexico offshore–general
946	Alabama Gulf of Mexico offshore–State
947	Alabama Gulf of Mexico offshore–Federal
948	Mississippi Gulf of Mexico offshore–general
949	Mississippi Gulf of Mexico offshore–State
950	Mississippi Gulf of Mexico offshore–Federal
951	Louisiana Gulf of Mexico offshore–general
952	Louisiana Gulf of Mexico offshore–State
953	Louisiana Gulf of Mexico offshore–Federal
954	Texas Gulf of Mexico offshore–general
955	Texas Gulf of Mexico offshore–State
956	Texas Gulf of Mexico offshore–Federal
957	California Pacific offshore–general
958	California Pacific offshore–State
959	California Pacific offshore–Federal
960	Oregon Pacific offshore–general
961	Oregon Pacific offshore–State
962	Oregon Pacific offshore–Federal
963	Washington Pacific offshore–general
964	Washington Pacific offshore–State
965	Washington Pacific offshore–Federal
972	Alaska Arctic offshore–general
973	Alaska Arctic offshore–State
974	Alaska Arctic offshore–Federal
975	Alaska Bering Sea offshore–general
976	Alaska Bering Sea offshore–State
977	Alaska Bering Sea offshore–Federal
978	Alaska Pacific offshore–general

Code	Province
979	Alaska Pacific offshore–State
980	Alaska Pacific offshore–Federal
987	Minnesota Lake Superior offshore
988	Wisconsin Lake Superior offshore
989	Michigan Lake Superior offshore
990	Indiana Lake Michigan offshore
991	Illinois Lake Michigan offshore
992	Wisconsin Lake Michigan offshore
993	Michigan Lake Michigan offshore
994	Michigan Lake Huron offshore
995	Michigan Lake Erie offshore
996	Ohio Lake Erie offshore
997	Pennsylvania Lake Erie offshore
998	New York Lake Erie offshore
999	New York Lake Ontario offshore

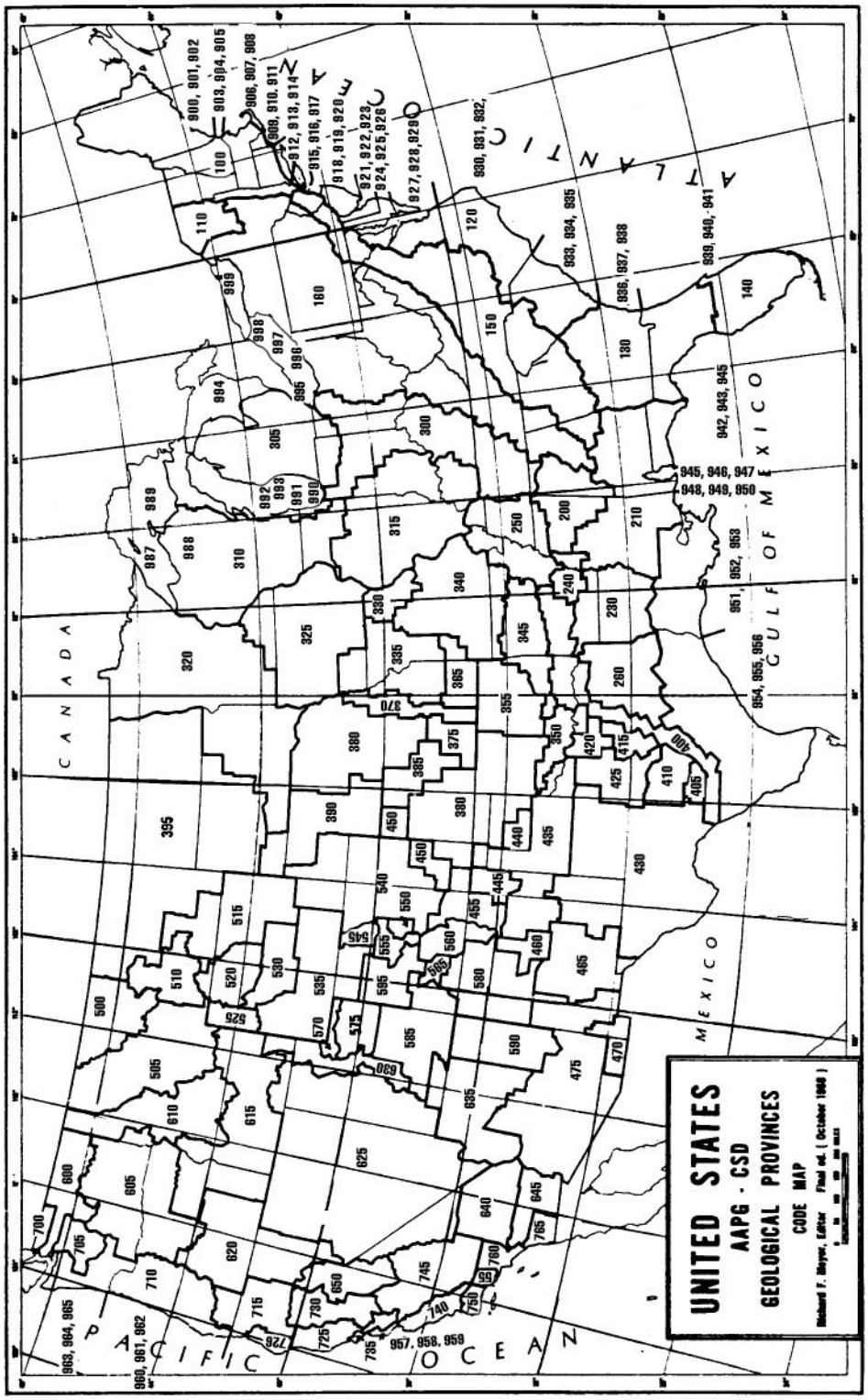

Figure 1. Geologic Provinces of the United States.

Table 1

Samples from Gas and Oil Wells in the United States

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20044
STATE	ARIZONA
COUNTY	APACHE
FIELD	WILDCAT
WELL NAME	STATE NO. 3-1
API	0200120299
LOCATION	SEC. 3, T11N, R29E
OWNER	RIDGEWAY ARIZONA OIL CORP.
COMPLETED	950913
SAMPLED	991220
FORMATION	PERM-AMOS WASH
GEOLOGIC PROVINCE CODE	590
TRUE VERTICAL DEPTH (FT)	1676
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	420
OPEN FLOW, MCFD	1347

COMPONENT, MOLE PCT	
METHANE	0.1
ETHANE	TRACE
PROPANE	TRACE
N-BUTANE	TRACE
ISOBUTANE	0.0
N-PENTANE	TRACE
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	2.4
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	TRACE
CARBON DIOXIDE	96.5
HELIUM	0.69
HEATING VALUE*	6
SPECIFIC GRAVITY	1.505

SAMPLE	20918
STATE	ARKANSAS
COUNTY	POPE
FIELD	SILEX
WELL NAME	SILEX 8-22-C
API	0311510617
LOCATION	SEC. 22, T10N, R21W
OWNER	XTO ENERGY, INC.
COMPLETED	001126
SAMPLED	011029
FORMATION	MISS-BOONE, DEVO-PENTERS
GEOLOGIC PROVINCE CODE	345
TRUE VERTICAL DEPTH (FT)	4550
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	345
OPEN FLOW, MCFD	100

COMPONENT, MOLE PCT	
METHANE	95.8
ETHANE	1.0
PROPANE	0.1
N-BUTANE	0.0
ISOBUTANE	0.0
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	2.7
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.08
HEATING VALUE*	988
SPECIFIC GRAVITY	0.573

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20008	COMPONENT, MOLE PCT	
STATE	ARKANSAS	METHANE	95.6
COUNTY	YELL	ETHANE	2.0
FIELD	WAVELAND	PROPANE	0.2
WELL NAME	USA NO. 1-10	N-BUTANE	TRACE
API	0314910013	ISOBUTANE	0.1
LOCATION	SEC. 10, T5N, R25W	N-PENTANE	0.0
OWNER	SEECO, INC.	ISOPENTANE	0.0
COMPLETED	971201	CYCLOPENTANE	--
SAMPLED	980000	HEXANES PLUS	0.0
FORMATION	PENN-BORUM U&L	NITROGEN	0.7
GEOLOGIC PROVINCE CODE	345	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	6754	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	1894	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	7752	CARBON DIOXIDE	1.2
		HELIUM	0.12
		HEATING VALUE*	1,013
		SPECIFIC GRAVITY	0.582

SAMPLE	20915	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	50.2
COUNTY	BACA	ETHANE	2.3
FIELD	GREENWOOD	PROPANE	1.5
WELL NAME	BRANDT O'NEILL UNIT 1	N-BUTANE	0.7
API	0500906220	ISOBUTANE	0.3
LOCATION	SEC. 16, T34S, R41W	N-PENTANE	0.2
OWNER	KAISER-FRANCIS OIL CO.	ISOPENTANE	0.2
COMPLETED	920813	CYCLOPENTANE	--
SAMPLED	011101	HEXANES PLUS	0.2
FORMATION	PERM-RED CAVE	NITROGEN	42.7
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	1260	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.4
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	338	CARBON DIOXIDE	TRACE
		HELIUM	1.16
		HEATING VALUE*	646
		SPECIFIC GRAVITY	0.778

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20917	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	34.1
COUNTY	BACA	ETHANE	1.7
FIELD	GREENWOOD	PROPANE	0.9
WELL NAME	SEMINOLE 1-33	N-BUTANE	0.4
API	0500906601	ISOBUTANE	0.3
LOCATION	SEC. 33, T34S, R41W	N-PENTANE	0.1
OWNER	ENERGY ALLIANCE CO., INC.	ISOPENTANE	0.2
COMPLETED	000212	CYCLOPENTANE	--
SAMPLED	011101	HEXANES PLUS	0.2
FORMATION	PERM-RED CAVE	NITROGEN	60.2
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	1290	ARGON	0.2
MEASURED DEPTH		HYDROGEN	0.1
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	147	CARBON DIOXIDE	TRACE
		HELIUM	1.51
		HEATING VALUE*	444
		SPECIFIC GRAVITY	0.836

SAMPLE	20909	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	34.9
COUNTY	BACA	ETHANE	1.1
FIELD	WALSH	PROPANE	0.6
WELL NAME	GREENSBURG STATE 1-16	N-BUTANE	0.2
API	0500906560	ISOBUTANE	0.1
LOCATION	SEC. 16, T33S, R43W	N-PENTANE	0.1
OWNER	ENERGY ALLIANCE CO., INC.	ISOPENTANE	0.1
COMPLETED	960118	CYCLOPENTANE	--
SAMPLED	011031	HEXANES PLUS	0.1
FORMATION	PERM-RED CAVE	NITROGEN	61.2
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	1609	ARGON	0.2
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	800	CARBON DIOXIDE	TRACE
		HELIUM	1.61
		HEATING VALUE*	405
		SPECIFIC GRAVITY	0.821

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20911
STATE	COLORADO
COUNTY	BACA
FIELD	SPELUNKER
WELL NAME	KITO 1-21
API	0500906589
LOCATION	SEC. 21, T33S, R43W
OWNER	ENERGY ALLIANCE CO., INC.
COMPLETED	981217
SAMPLED	011031
FORMATION	PERM-RED CAVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	1609
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	62
OPEN FLOW, MCFD	480

COMPONENT, MOLE PCT	
METHANE	34.1
ETHANE	1.0
PROPANE	0.6
N-BUTANE	0.2
ISOBUTANE	0.1
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	61.7
OXYGEN	0.0
ARGON	0.2
HYDROGEN	0.2
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	1.62
HEATING VALUE*	397
SPECIFIC GRAVITY	0.823

SAMPLE	20912
STATE	COLORADO
COUNTY	BACA
FIELD	WALSH
WELL NAME	MCKINLEY 2-20
API	0500906564
LOCATION	SEC. 20, T33S, R43W
OWNER	ENERGY ALLIANCE CO., INC.
COMPLETED	960331
SAMPLED	011031
FORMATION	PERM-RED CAVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	1624
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	487

COMPONENT, MOLE PCT	
METHANE	35.3
ETHANE	1.1
PROPANE	0.6
N-BUTANE	0.3
ISOBUTANE	0.1
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	60.4
OXYGEN	0.0
ARGON	0.2
HYDROGEN	0.1
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	1.62
HEATING VALUE*	415
SPECIFIC GRAVITY	0.82

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20910	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	36.8
COUNTY	BACA	ETHANE	1.1
FIELD	UNNAMED	PROPANE	0.6
WELL NAME	ALLEY 2-17	N-BUTANE	0.3
API	0500906569	ISOBUTANE	0.1
LOCATION	SEC. 17, T33S, R43W	N-PENTANE	0.1
OWNER	ENERGY ALLIANCE CO., INC.	ISOPENTANE	0.1
COMPLETED	961005	CYCLOPENTANE	--
SAMPLED	011031	HEXANES PLUS	0.1
FORMATION	PERM-RED CAVE, PENN-WABAUNSEE	NITROGEN	58.9
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3079	ARGON	0.2
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	322	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1391	CARBON DIOXIDE	0.1
		HELIUM	1.65
		HEATING VALUE*	430
		SPECIFIC GRAVITY	0.814

SAMPLE	20916	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	66.1
COUNTY	BACA	ETHANE	6.5
FIELD	GREENWOOD	PROPANE	4.0
WELL NAME	BURGHART A-1 LEASE	N-BUTANE	1.3
API	0500905038	ISOBUTANE	0.5
LOCATION	SEC. 22, T34S, R41W	N-PENTANE	0.4
OWNER	BEREXCO, INC.	ISOPENTANE	0.3
COMPLETED	560502	CYCLOPENTANE	--
SAMPLED	011101	HEXANES PLUS	0.5
FORMATION	PENN-TOPEKA	NITROGEN	19.8
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2830	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1620	CARBON DIOXIDE	0.1
		HELIUM	0.54
		HEATING VALUE*	993
		SPECIFIC GRAVITY	0.755

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20914
STATE	COLORADO
COUNTY	BACA
FIELD	MIDWAY
WELL NAME	LEACH 1-10
API	0500906397
LOCATION	SEC. 10, T33S, R42W
OWNER	SANDLIN OIL CORP.
COMPLETED	991102
SAMPLED	011101
FORMATION	PENN-TOPEKA
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	3063
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	150

COMPONENT, MOLE PCT	
METHANE	63.7
ETHANE	5.8
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	24.3
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.62
HEATING VALUE*	907
SPECIFIC GRAVITY	0.748

SAMPLE	20906
STATE	COLORADO
COUNTY	BACA
FIELD	GREENWOOD
WELL NAME	MCCALL NO. 1-23
API	0500906544
LOCATION	SEC. 23, T31S, R42W
OWNER	ENERGY ALLIANCE CO., INC.
COMPLETED	950426
SAMPLED	011031
FORMATION	PENN-TOPEKA
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	3264
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	368

COMPONENT, MOLE PCT	
METHANE	57.8
ETHANE	5.5
PROPANE	3.6
N-BUTANE	1.1
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	29.8
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.75
HEATING VALUE*	860
SPECIFIC GRAVITY	0.777

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20875
STATE	COLORADO
COUNTY	GARFIELD
FIELD	PARACHUTE
WELL NAME	AMERICAN SODA GM 268-3
API	0504507313
LOCATION	SEC. 3, T7S, R96W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	000809
SAMPLED	011015
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	6266
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	2000
OPEN FLOW, MCFD	1128

COMPONENT, MOLE PCT	
METHANE	89.2
ETHANE	4.8
PROPANE	1.0
N-BUTANE	0.2
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	4.0
HELIUM	0.01
HEATING VALUE*	1,041
SPECIFIC GRAVITY	0.639

SAMPLE	20812
STATE	COLORADO
COUNTY	MESA
FIELD	BRONCO FLATS
WELL NAME	SULFUR GULCH 9-98-10
API	0507708682
LOCATION	SEC. 10, T9S, R98W
OWNER	MARALEX RESOURCES, INC.
COMPLETED	950225
SAMPLED	010828
FORMATION	CRET-CAMEO
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	3052
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	368

COMPONENT, MOLE PCT	
METHANE	88.7
ETHANE	6.3
PROPANE	2.4
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	0.4
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.03
HEATING VALUE*	1,116
SPECIFIC GRAVITY	0.64

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20811
STATE	COLORADO
COUNTY	MESA
FIELD	BRONCO FLATS
WELL NAME	SULFUR GULCH 9-98-2
API	0507708709
LOCATION	SEC. 2, T9S, R98W
OWNER	MARALEX RESOURCES, INC.
COMPLETED	000518
SAMPLED	010828
FORMATION	CRET-CAMEO COAL
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	2600
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	20

COMPONENT, MOLE PCT	
METHANE	91.5
ETHANE	4.0
PROPANE	1.6
N-BUTANE	0.2
ISOBUTANE	0.3
N-PENTANE	TRACE
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.4
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.8
HELIUM	0.03
HEATING VALUE*	1,061
SPECIFIC GRAVITY	0.619

SAMPLE	20796
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	FEDERAL 1-3
API	0507708192
LOCATION	SEC. 1, T10S, R97W
OWNER	ROCKY MOUNTAIN OPERATING CO., INC.
COMPLETED	791129
SAMPLED	010827
FORMATION	CRET-CORCORAN
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	3262
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	0
OPEN FLOW, MCFD	1057

COMPONENT, MOLE PCT	
METHANE	94.3
ETHANE	2.3
PROPANE	0.6
N-BUTANE	0.1
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.4
HELIUM	0.01
HEATING VALUE*	1,020
SPECIFIC GRAVITY	0.599

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20800
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	FEDERAL 35-1
API	0507708178
LOCATION	SEC. 35, T9S, R97W
OWNER	ROCKY MOUNTAIN OPERATING CO., INC.
COMPLETED	791226
SAMPLED	010827
FORMATION	CRET-CORCORAN
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	3072
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	0
OPEN FLOW, MCFD	1000

COMPONENT, MOLE PCT	
METHANE	87.9
ETHANE	6.5
PROPANE	2.3
N-BUTANE	0.6
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.2
HELIUM	0.04
HEATING VALUE*	1,124
SPECIFIC GRAVITY	0.651

SAMPLE	20816
STATE	COLORADO
COUNTY	MESA
FIELD	BRONCO FLATS
WELL NAME	WAGON TRACK FEDERAL 12-16
API	0507708700
LOCATION	SEC. 12, T9S, R98W
OWNER	BLACK HILLS EXPL. & PROD. INC.
COMPLETED	961226
SAMPLED	010828
FORMATION	CRET-CORCORAN
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	2879
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	433

COMPONENT, MOLE PCT	
METHANE	87.5
ETHANE	7.1
PROPANE	2.6
N-BUTANE	0.6
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.4
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.8
HELIUM	0.04
HEATING VALUE*	1,137
SPECIFIC GRAVITY	0.65

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20815
STATE	COLORADO
COUNTY	MESA
FIELD	BRONCO FLATS
WELL NAME	WAGON TRACK FEDERAL 12-14
API	0507708699
LOCATION	SEC. 12, T9S, R98W
OWNER	BLACK HILLS EXPL. & PROD. INC.
COMPLETED	961228
SAMPLED	010828
FORMATION	CRET-CORCORAN
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	2854
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	475

COMPONENT, MOLE PCT	
METHANE	88.5
ETHANE	6.8
PROPANE	2.2
N-BUTANE	0.6
ISOBUTANE	0.4
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.5
HELIUM	0.04
HEATING VALUE*	1,131
SPECIFIC GRAVITY	0.642

SAMPLE	20819
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	HORSESHOE CANYON 4-21
API	0507708486
LOCATION	SEC. 21, T9S, R97W
OWNER	KOCH EXPLORATION CO., LLC
COMPLETED	830218
SAMPLED	010828
FORMATION	CRET-CORCORAN, DAKOTA
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	7671
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	100
OPEN FLOW, MCFD	2947

COMPONENT, MOLE PCT	
METHANE	92.5
ETHANE	2.0
PROPANE	0.5
N-BUTANE	0.1
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	4.2
HELIUM	0.04
HEATING VALUE*	999
SPECIFIC GRAVITY	0.617

* CALCULATED GROSS BTU PER CU FT, DRY, AT 50 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20803	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	89.8
COUNTY	MESA	ETHANE	4.6
FIELD	SHIRE GULCH	PROPANE	1.6
WELL NAME	HORSESHOE CANYON 3	N-BUTANE	0.4
API	0507708656	ISOBUTANE	0.3
LOCATION	SEC. 28, T9S, R97W	N-PENTANE	0.1
OWNER	KOCH EXPLORATION CO., LLC	ISOPENTANE	0.1
COMPLETED	930315	CYCLOPENTANE	--
SAMPLED	010827	HEXANES PLUS	0.2
FORMATION	CRET-COZZETTE	NITROGEN	0.8
GEOLOGIC PROVINCE CODE	595	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2902	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	360	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	501	CARBON DIOXIDE	2.1
		HELIUM	0.03
		HEATING VALUE*	1,071
		SPECIFIC GRAVITY	0.634

SAMPLE	20814	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	87.3
COUNTY	MESA	ETHANE	7.1
FIELD	BRONCO FLATS	PROPANE	2.7
WELL NAME	WAGON TRAIL FEDERAL 44-11	N-BUTANE	0.7
API	0507708606	ISOBUTANE	0.5
LOCATION	SEC. 11, T9S, R98W	N-PENTANE	0.1
OWNER	BLACK HILLS EXPL. & PROD. INC.	ISOPENTANE	0.2
COMPLETED	911220	CYCLOPENTANE	--
SAMPLED	010828	HEXANES PLUS	0.3
FORMATION	CRET-COZZETTE	NITROGEN	0.3
GEOLOGIC PROVINCE CODE	595	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2790	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1300	CARBON DIOXIDE	0.8
		HELIUM	0.04
		HEATING VALUE*	1,139
		SPECIFIC GRAVITY	0.652

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY.
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20820
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	HORSESHOE CANYON 2-22
API	0507708654
LOCATION	SEC. 22, T9S, R97W
OWNER	KOCH EXPLORATION CO., LLC
COMPLETED	930105
SAMPLED	010828
FORMATION	CRET-COZZETTE, CORCORAN
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	3175
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	905

COMPONENT, MOLE PCT	
METHANE	89.1
ETHANE	6.5
PROPANE	2.2
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.01
HEATING VALUE*	1,109
SPECIFIC GRAVITY	0.634

SAMPLE	20817
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	HORSESHOE CANYON 3-16
API	0507708660
LOCATION	SEC. 16, T9S, R97W
OWNER	KOCH EXPLORATION CO., LLC
COMPLETED	930106
SAMPLED	010828
FORMATION	CRET-COZZETTE, CORCORAN
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	3190
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	300
OPEN FLOW, MCFD	1357

COMPONENT, MOLE PCT	
METHANE	89.5
ETHANE	5.8
PROPANE	1.9
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.2
HELIUM	0.02
HEATING VALUE*	1,104
SPECIFIC GRAVITY	0.635

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20818	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	89.6
COUNTY	MESA	ETHANE	5.7
FIELD	SHIRE GULCH	PROPANE	1.9
WELL NAME	HORSESHOE CANYON 1-16	N-BUTANE	0.5
API	0507708650	ISOBUTANE	0.3
LOCATION	SEC. 16, T9S, R97W	N-PENTANE	0.1
OWNER	KOCH EXPLORATION CO., LLC	ISOPENTANE	0.2
COMPLETED	921216	CYCLOPENTANE	–
SAMPLED	010828	HEXANES PLUS	0.3
FORMATION	CRET-COZZETTE, CORCORAN	NITROGEN	0.2
GEOLOGIC PROVINCE CODE	595	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3165	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	310	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	745	CARBON DIOXIDE	1.3
		HELIUM	0.03
		HEATING VALUE*	1,106
		SPECIFIC GRAVITY	0.637

SAMPLE	20824	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	89.7
COUNTY	MESA	ETHANE	5.7
FIELD	SHIRE GULCH	PROPANE	1.9
WELL NAME	HORSESHOE CANYON 3-27	N-BUTANE	0.5
API	0507708655	ISOBUTANE	0.3
LOCATION	SEC. 27, T9S, R97W	N-PENTANE	0.1
OWNER	KOCH EXPLORATION CO., LLC	ISOPENTANE	0.2
COMPLETED	921229	CYCLOPENTANE	–
SAMPLED	010828	HEXANES PLUS	0.3
FORMATION	CRET-COZZETTE, CORCORAN	NITROGEN	0.2
GEOLOGIC PROVINCE CODE	595	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3091	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	360	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	425	CARBON DIOXIDE	1.0
		HELIUM	0.03
		HEATING VALUE*	1,110
		SPECIFIC GRAVITY	0.636

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20825
STATE	COLORADO
COUNTY	MESA
FIELD	ROBERTS CANYON
WELL NAME	HORSESHOE CANYON 1-27
API	0507708663
LOCATION	SEC. 27, T9S, R97W
OWNER	KOCH EXPLORATION CO., LLC
COMPLETED	930125
SAMPLED	010828
FORMATION	CRET-COZZETTE, CORCORAN
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	3126
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	185
OPEN FLOW, MCFD	555

COMPONENT, MOLE PCT	
METHANE	89.4
ETHANE	5.8
PROPANE	2.0
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.1
HELIUM	0.03
HEATING VALUE*	1,112
SPECIFIC GRAVITY	0.638

SAMPLE	20823
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	HORSESHOE CANYON 2-17
API	0507708651
LOCATION	SEC. 17, T9S, R97W
OWNER	KOCH EXPLORATION CO., LLC
COMPLETED	930112
SAMPLED	010828
FORMATION	CRET-COZZETTE, CORCORAN
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	2978
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	580
OPEN FLOW, MCFD	4296

COMPONENT, MOLE PCT	
METHANE	88.2
ETHANE	6.4
PROPANE	2.3
N-BUTANE	0.6
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.04
HEATING VALUE*	1,127
SPECIFIC GRAVITY	0.647

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20806	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	92.8
COUNTY	MESA	ETHANE	1.8
FIELD	SHIRE GULCH	PROPANE	0.5
WELL NAME	HORSESHOE CANYON 3-29	N-BUTANE	0.1
API	0507708658	ISOBUTANE	0.1
LOCATION	SEC. 29, T9S, R97W	N-PENTANE	TRACE
OWNER	KOCH EXPLORATION CO., LLC	ISOPENTANE	TRACE
COMPLETED	921214	CYCLOPENTANE	--
SAMPLED	010827	HEXANES PLUS	0.1
FORMATION	CRET-COZZETTE, DAKOTA	NITROGEN	0.4
GEOLOGIC PROVINCE CODE	595	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	7203	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	300	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1953	CARBON DIOXIDE	4.2
		HELIUM	0.06
		HEATING VALUE*	994
		SPECIFIC GRAVITY	0.614

SAMPLE	20822	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	90.6
COUNTY	MESA	ETHANE	3.4
FIELD	SHIRE GULCH	PROPANE	1.1
WELL NAME	HORSESHOE CANYON 2-20	N-BUTANE	0.3
API	0507708645	ISOBUTANE	0.2
LOCATION	SEC. 20, T9S, R97W	N-PENTANE	0.1
OWNER	KOCH EXPLORATION CO., LLC	ISOPENTANE	0.1
COMPLETED	930222	CYCLOPENTANE	--
SAMPLED	010828	HEXANES PLUS	0.1
FORMATION	CRET-CZZT, CRCR, DKOT	NITROGEN	0.5
GEOLOGIC PROVINCE CODE	595	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	7575	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	830	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1728	CARBON DIOXIDE	3.5
		HELIUM	0.06
		HEATING VALUE*	1,034
		SPECIFIC GRAVITY	0.631

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20821
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	HORSESHOE CANYON 1-21
API	0507708456
LOCATION	SEC. 21, T9S, R97W
OWNER	KOCH EXPLORATION CO., LLC
COMPLETED	820630
SAMPLED	010828
FORMATION	CRET-CZZT, CRCR, DKOT
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	7744
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	300
OPEN FLOW, MCFD	3403

COMPONENT, MOLE PCT	
METHANE	85.7
ETHANE	3.0
PROPANE	0.9
N-BUTANE	0.2
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.9
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	8.8
HELIUM	0.09
HEATING VALUE*	967
SPECIFIC GRAVITY	0.677

SAMPLE	20802
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	HORSESHOE CANYON 1-33
API	0507708426
LOCATION	SEC. 33, T9S, R97W
OWNER	KOCH EXPLORATION CO., LLC
COMPLETED	820201
SAMPLED	010827
FORMATION	CRET-DAKOTA
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	7098
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	50
OPEN FLOW, MCFD	685

COMPONENT, MOLE PCT	
METHANE	89.9
ETHANE	4.6
PROPANE	1.7
N-BUTANE	0.4
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.2
HELIUM	0.03
HEATING VALUE*	1,075
SPECIFIC GRAVITY	0.635

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20804	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	85.8
COUNTY	MESA	ETHANE	6.1
FIELD	SHIRE GULCH	PROPANE	3.1
WELL NAME	HORSESHOE CANYON 2-29	N-BUTANE	1.2
API	0507708657	ISOBUTANE	0.9
LOCATION	SEC. 29, T9S, R97W	N-PENTANE	0.3
OWNER	KOCH EXPLORATION CO., LLC	ISOPENTANE	0.5
COMPLETED	930301	CYCLOPENTANE	--
SAMPLED	010827	HEXANES PLUS	0.4
FORMATION	CRET-DAKOTA	NITROGEN	0.3
GEOLOGIC PROVINCE CODE	595	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	7172	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	430	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	2106	CARBON DIOXIDE	1.2
		HELIUM	0.09
		HEATING VALUE*	1,176
		SPECIFIC GRAVITY	0.682

SAMPLE	20809	COMPONENT, MOLE PCT	
STATE	COLORADO	METHANE	90.5
COUNTY	MESA	ETHANE	4.0
FIELD	PLATEAU	PROPANE	0.8
WELL NAME	NICHOLS 2-26	N-BUTANE	0.2
API	0507708332	ISOBUTANE	0.2
LOCATION	SEC. 26, T10S, R97W	N-PENTANE	TRACE
OWNER	ROCKY MOUNTAIN OPERATING CO., INC.	ISOPENTANE	0.1
COMPLETED	810527	CYCLOPENTANE	--
SAMPLED	010828	HEXANES PLUS	0.1
FORMATION	CRET-DAKOTA	NITROGEN	0.5
GEOLOGIC PROVINCE CODE	595	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	7687	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	0	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	885	CARBON DIOXIDE	3.6
		HELIUM	0.09
		HEATING VALUE*	1,029
		SPECIFIC GRAVITY	0.627

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20795
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	BLAIR NO. 1
API	0507708156
LOCATION	SEC. 1, T10S, R97W
OWNER	ROCKY MOUNTAIN OPERATING CO., INC.
COMPLETED	790502
SAMPLED	010827
FORMATION	CRET-DAKOTA, FRONTIER
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	7412
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	0
OPEN FLOW, MCFD	230

COMPONENT, MOLE PCT	
METHANE	93.2
ETHANE	0.9
PROPANE	0.1
N-BUTANE	TRACE
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	TRACE
CYCLOPENTANE	–
HEXANES PLUS	TRACE
NITROGEN	1.6
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	4.0
HELIUM	0.10
HEATING VALUE*	965
SPECIFIC GRAVITY	0.605

SAMPLE	20813
STATE	COLORADO
COUNTY	MESA
FIELD	BRONCO FLATS
WELL NAME	WAGON TRAIL NO. 1-3
API	0507708672
LOCATION	SEC. 3, T9S, R98W
OWNER	MARALEX RESOURCES, INC.
COMPLETED	950511
SAMPLED	010828
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	2226
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	290
OPEN FLOW, MCFD	300

COMPONENT, MOLE PCT	
METHANE	95.5
ETHANE	1.5
PROPANE	0.1
N-BUTANE	TRACE
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	–
HEXANES PLUS	TRACE
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.6
HELIUM	0.01
HEATING VALUE*	1,002
SPECIFIC GRAVITY	0.591

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20805
STATE	COLORADO
COUNTY	MESA
FIELD	SHIRE GULCH
WELL NAME	HORSESHOE CANYON 2-29
API	0507708657
LOCATION	SEC. 29, T9S, R97W
OWNER	KOCH EXPLORATION CO., LLC
COMPLETED	930301
SAMPLED	010827
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	595
TRUE VERTICAL DEPTH (FT)	2506
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1350
OPEN FLOW, MCFD	1051

COMPONENT, MOLE PCT	
METHANE	85.8
ETHANE	6.1
PROPANE	3.1
N-BUTANE	1.2
ISOBUTANE	0.9
N-PENTANE	0.3
ISOPENTANE	0.5
CYCLOPENTANE	–
HEXANES PLUS	0.4
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.2
HELIUM	0.09
HEATING VALUE*	1,176
SPECIFIC GRAVITY	0.682

SAMPLE	20735
STATE	KANSAS
COUNTY	BARBER
FIELD	MEDICINE LODGE-BOGGS
WELL NAME	RICKE NO. 2
API	1500722610
LOCATION	SEC. 29, T33S, R13W
OWNER	CLARK EXPLORATION CO.
COMPLETED	000229
SAMPLED	010712
FORMATION	PENN-SNYDERVILLE
GEOLOGIC PROVINCE CODE	375
TRUE VERTICAL DEPTH (FT)	3990
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	520
OPEN FLOW, MCFD	2022

COMPONENT, MOLE PCT	
METHANE	83.1
ETHANE	3.7
PROPANE	2.1
N-BUTANE	0.7
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.3
NITROGEN	9.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.2
HELIUM	0.27
HEATING VALUE*	1,020
SPECIFIC GRAVITY	0.659

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20405
STATE	KANSAS
COUNTY	FINNEY
FIELD	HUGOTON
WELL NAME	CARLTON A1-2
API	1505521445
LOCATION	SEC. 6, T26S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	960423
SAMPLED	000815
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2668
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	66
OPEN FLOW, MCFD	156

COMPONENT	MOLE PCT
METHANE	71.5
ETHANE	6.4
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.2
NITROGEN	16.1
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.41
HEATING VALUE*	1,006
SPECIFIC GRAVITY	0.721

SAMPLE	20406
STATE	KANSAS
COUNTY	FINNEY
FIELD	HUGOTON
WELL NAME	JONES 6-2
API	1505521506
LOCATION	SEC. 29, T26S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	970304
SAMPLED	000815
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2726
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	98
OPEN FLOW, MCFD	320

COMPONENT,	MOLE PCT
METHANE	71.5
ETHANE	5.9
PROPANE	3.1
N-BUTANE	0.9
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.2
NITROGEN	17.2
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.44
HEATING VALUE*	977
SPECIFIC GRAVITY	0.714

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20004	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	61.2
COUNTY	FINNEY	ETHANE	4.7
FIELD	HUGOTON	PROPANE	2.5
WELL NAME	JACKSON, ALVIN NO. 2-33	N-BUTANE	0.7
API	1505521564	ISOBUTANE	0.3
LOCATION	SEC. 33, T22S, R32W	N-PENTANE	0.1
OWNER	CROSS TIMBERS OPERATING CO.	ISOPENTANE	0.1
COMPLETED	970829	CYCLOPENTANE	--
SAMPLED	980127	HEXANES PLUS	0.1
FORMATION	PERM-CHASE GROUP	NITROGEN	29.5
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2702	ARGON	0.1
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	70	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	406	CARBON DIOXIDE	0.1
		HELIUM	0.65
		HEATING VALUE*	817
		SPECIFIC GRAVITY	0.744

SAMPLE	20404	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	71.5
COUNTY	FINNEY	ETHANE	5.3
FIELD	PANOMA	PROPANE	3.4
WELL NAME	CARLTON B-1	N-BUTANE	1.0
API	1505520270	ISOBUTANE	0.4
LOCATION	SEC. 6, T26S, R34W	N-PENTANE	0.2
OWNER	CIMAREX ENERGY CO.	ISOPENTANE	0.2
COMPLETED	780216	CYCLOPENTANE	--
SAMPLED	000815	HEXANES PLUS	0.2
FORMATION	PERM-COUNCIL GROVE	NITROGEN	16.3
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2950	ARGON	0.1
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	174	CARBON DIOXIDE	TRACE
		HELIUM	0.42
		HEATING VALUE*	998
		SPECIFIC GRAVITY	0.719

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20407
STATE	KANSAS
COUNTY	FINNEY
FIELD	PANOMA
WELL NAME	BROWN C1
API	1505520304
LOCATION	SEC. 34, T25S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	780726
SAMPLED	000817
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2891
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	279

COMPONENT, MOLE PCT	
METHANE	70.9
ETHANE	6.0
PROPANE	3.3
N-BUTANE	0.9
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	17.6
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.44
HEATING VALUE*	975
SPECIFIC GRAVITY	0.717

SAMPLE	20288
STATE	KANSAS
COUNTY	GRANT
FIELD	PANOMA
WELL NAME	MEYERS 2-2
API	1506720511
LOCATION	SEC. 17, T27S, R35W
OWNER	SAMEDAN OIL CORP.
COMPLETED	780119
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2945
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	4100

COMPONENT, MOLE PCT	
METHANE	73.0
ETHANE	6.5
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.6
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,021
SPECIFIC GRAVITY	0.714

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20287
STATE	KANSAS
COUNTY	GRANT
FIELD	PANOMA
WELL NAME	MEYERS 1-2
API	1506720563
LOCATION	SEC. 9, T27S, R35W
OWNER	SAMEDAN OIL CORP.
COMPLETED	791213
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2840
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	4200

COMPONENT, MOLE PCT	
METHANE	72.9
ETHANE	6.5
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.6
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.42
HEATING VALUE*	1,020
SPECIFIC GRAVITY	0.714

SAMPLE	20437
STATE	KANSAS
COUNTY	HASKELL
FIELD	HUGOTON
WELL NAME	GUNNELL 1-2
API	1508121175
LOCATION	SEC. 11, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	980414
SAMPLED	001107
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2662
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	134
OPEN FLOW, MCFD	257

COMPONENT, MOLE PCT	
METHANE	64.8
ETHANE	5.1
PROPANE	2.7
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	23.3
OXYGEN	2.2
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.36
HEATING VALUE*	866
SPECIFIC GRAVITY	0.737

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20444
STATE	KANSAS
COUNTY	HASKELL
FIELD	HUGOTON
WELL NAME	JONES 11-2
API	1508121095
LOCATION	SEC. 8, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	970902
SAMPLED	001107
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2694
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	137
OPEN FLOW, MCFD	249

COMPONENT, MOLE PCT	
METHANE	70.7
ETHANE	6.4
PROPANE	3.8
N-BUTANE	1.3
ISOBUTANE	0.5
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	16.0
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.38
HEATING VALUE*	1,022
SPECIFIC GRAVITY	0.735

SAMPLE	20442
STATE	KANSAS
COUNTY	HASKELL
FIELD	HUGOTON
WELL NAME	JONES 9
API	1508100354
LOCATION	SEC. 4, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	460116
SAMPLED	001107
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2740
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	418
OPEN FLOW, MCFD	254

COMPONENT, MOLE PCT	
METHANE	71.9
ETHANE	5.8
PROPANE	3.0
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	17.1
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.42
HEATING VALUE*	968
SPECIFIC GRAVITY	0.711

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20443
STATE	KANSAS
COUNTY	HASKELL
FIELD	HUGOTON
WELL NAME	JONES 9-2
API	1508121110
LOCATION	SEC. 4, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	970602
SAMPLED	001107
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2695
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	129
OPEN FLOW, MCFD	330

COMPONENT, MOLE PCT	
METHANE	71.9
ETHANE	5.8
PROPANE	3.1
N-BUTANE	0.9
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	17.0
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.42
HEATING VALUE*	971
SPECIFIC GRAVITY	0.712

SAMPLE	20440
STATE	KANSAS
COUNTY	HASKELL
FIELD	HUGOTON
WELL NAME	JONES 12-2
API	1508120758
LOCATION	SEC. 10, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	930413
SAMPLED	001107
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2701
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	277

COMPONENT, MOLE PCT	
METHANE	71.8
ETHANE	5.8
PROPANE	3.1
N-BUTANE	0.9
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	17.0
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.43
HEATING VALUE*	970
SPECIFIC GRAVITY	0.712

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20436
STATE	KANSAS
COUNTY	HASKELL
FIELD	HUGOTON
WELL NAME	GUNNELL 1
API	1508100349
LOCATION	SEC. 2, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	490831
SAMPLED	001107
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2766
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	420
OPEN FLOW, MCFD	333

COMPONENT, MOLE PCT	
METHANE	72.2
ETHANE	5.6
PROPANE	2.9
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	17.3
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.45
HEATING VALUE*	958
SPECIFIC GRAVITY	0.707

SAMPLE	20446
STATE	KANSAS
COUNTY	HASKELL
FIELD	HUGOTON
WELL NAME	GOVERNMENT 3-2
API	1508121007
LOCATION	SEC. 12, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	990726
SAMPLED	001107
FORMATION	PERM CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2762
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	203

COMPONENT, MOLE PCT	
METHANE	72.0
ETHANE	5.5
PROPANE	2.9
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	17.5
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.46
HEATING VALUE*	954
SPECIFIC GRAVITY	0.707

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO H2S ABSORPTION OR H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20447
STATE	KANSAS
COUNTY	HASKELL
FIELD	HUGOTON
WELL NAME	GOVERNMENT 3
API	1508100268
LOCATION	SEC. 12, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	490727
SAMPLED	001107
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2770
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	172

COMPONENT, MOLE PCT	
METHANE	71.9
ETHANE	5.4
PROPANE	2.8
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	17.9
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.49
HEATING VALUE*	946
SPECIFIC GRAVITY	0.706

SAMPLE	20439
STATE	KANSAS
COUNTY	HASKELL
FIELD	PANOMA
WELL NAME	JONES U1
API	1508120133
LOCATION	SEC. 10, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	781012
SAMPLED	001107
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2858
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	201

COMPONENT, MOLE PCT	
METHANE	68.9
ETHANE	5.6
PROPANE	2.9
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	19.7
OXYGEN	1.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	925
SPECIFIC GRAVITY	0.722

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20438	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	72.0
COUNTY	HASKELL	ETHANE	5.7
FIELD	PANOMA	PROPANE	3.0
WELL NAME	GUNNELL A-1	N-BUTANE	0.8
API	1508120157	ISOBUTANE	0.3
LOCATION	SEC. 2, T27S, R34W	N-PENTANE	0.2
OWNER	CIMAREX ENERGY CO.	ISOPENTANE	0.1
COMPLETED	790227	CYCLOPENTANE	--
SAMPLED	001107	HEXANES PLUS	0.1
FORMATION	PERM-COUNCIL GROVE	NITROGEN	17.2
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2938	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	256	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	109	CARBON DIOXIDE	TRACE
		HELIUM	0.43
		HEATING VALUE*	962
		SPECIFIC GRAVITY	0.709

SAMPLE	20441	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	71.7
COUNTY	HASKELL	ETHANE	5.9
FIELD	PANOMA	PROPANE	3.1
WELL NAME	JONES K-1	N-BUTANE	0.9
API	1508120103	ISOBUTANE	0.4
LOCATION	SEC. 7, T27S, R34W	N-PENTANE	0.2
OWNER	CIMAREX ENERGY CO.	ISOPENTANE	0.2
COMPLETED	771215	CYCLOPENTANE	--
SAMPLED	001107	HEXANES PLUS	0.2
FORMATION	PERM-COUNCIL GROVE	NITROGEN	17.1
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2912	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	248	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	213	CARBON DIOXIDE	TRACE
		HELIUM	0.44
		HEATING VALUE*	971
		SPECIFIC GRAVITY	0.713

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20445
STATE	KANSAS
COUNTY	HASKELL
FIELD	PANOMA
WELL NAME	GOVERNMENT A-3
API	1508120175
LOCATION	SEC. 12, T27S, R34W
OWNER	CIMAREX ENERGY CO.
COMPLETED	800318
SAMPLED	001107
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2922
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	294

COMPONENT, MOLE PCT	
METHANE	72.0
ETHANE	5.5
PROPANE	2.9
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	17.5
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.48
HEATING VALUE*	954
SPECIFIC GRAVITY	0.707

SAMPLE	50574
STATE	KANSAS
COUNTY	HASKELL
FIELD	EUBANK S
WELL NAME	ADAMS 'L' NO. 2
API	1508121093
LOCATION	SEC. 33, T29S, R34W
OWNER	ANADARKO PETROLEUM CORP.
COMPLETED	970221
SAMPLED	970911
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	5296
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	7710

COMPONENT, MOLE PCT	
METHANE	77.4
ETHANE	5.5
PROPANE	3.9
N-BUTANE	2.0
ISOBUTANE	0.9
N-PENTANE	0.8
ISOPENTANE	0.7
CYCLOPENTANE	--
HEXANES PLUS	2.0
NITROGEN	5.9
OXYGEN	--
ARGON	--
HYDROGEN	--
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.63
HEATING VALUE*	1,246
SPECIFIC GRAVITY	0.767

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20060	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	71.7
COUNTY	KEARNY	ETHANE	6.5
FIELD	HUGOTON	PROPANE	3.8
WELL NAME	JOHNSON 4B-19	N-BUTANE	1.2
API	1509321372	ISOBUTANE	0.4
LOCATION	SEC. 19, T25S, R36W	N-PENTANE	0.2
OWNER	OSBORN HEIRS CO.	ISOPENTANE	0.3
COMPLETED	941020	CYCLOPENTANE	--
SAMPLED	000413	HEXANES PLUS	0.3
FORMATION	PERM-CHASE GROUP	NITROGEN	15.4
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2586	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	39	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	305	CARBON DIOXIDE	0.1
		HELIUM	0.37
		HEATING VALUE*	1,023
		SPECIFIC GRAVITY	0.725

SAMPLE	20059	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	72.5
COUNTY	KEARNY	ETHANE	6.6
FIELD	HUGOTON	PROPANE	3.8
WELL NAME	JOHNSON 4-19	N-BUTANE	1.2
API	1509300320	ISOBUTANE	0.4
LOCATION	SEC. 19, T25S, R36W	N-PENTANE	0.2
OWNER	OSBORN HEIRS CO.	ISOPENTANE	0.3
COMPLETED	481027	CYCLOPENTANE	--
SAMPLED	000413	HEXANES PLUS	0.3
FORMATION	PERM-CHASE GROUP	NITROGEN	14.4
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2555	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	39	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD		CARBON DIOXIDE	TRACE
		HELIUM	0.38
		HEATING VALUE*	1,036
		SPECIFIC GRAVITY	0.722

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20305
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	TATE 4-I
API	1509320911
LOCATION	SEC. 11, T26S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO
COMPLETED	880129
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2710
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	157
OPEN FLOW, MCFD	766

COMPONENT, MOLE PCT	
METHANE	73.0
ETHANE	6.5
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.7
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.39
HEATING VALUE*	1,017
SPECIFIC GRAVITY	0.714

SAMPLE	20307
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	TATE 8-I
API	1509320909
LOCATION	SEC. 23, T26S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO
COMPLETED	871231
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2762
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	183
OPEN FLOW, MCFD	889

COMPONENT, MOLE PCT	
METHANE	73.1
ETHANE	6.5
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.7
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.39
HEATING VALUE*	1,018
SPECIFIC GRAVITY	0.713

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20301
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	MASONIC HOME 2-I
API	1509321264
LOCATION	SEC. 6, T26S, R35W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	930710
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2716
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	153
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	72.6
ETHANE	6.4
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.1
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,014
SPECIFIC GRAVITY	0.716

SAMPLE	20303
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	TATE 3
API	1509300514
LOCATION	SEC. 13, T26S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	491019
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2632
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	402
OPEN FLOW, MCFD	1949

COMPONENT, MOLE PCT	
METHANE	72.2
ETHANE	6.5
PROPANE	3.6
N-BUTANE	1.1
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	15.0
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,025
SPECIFIC GRAVITY	0.721

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY.
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20308
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	TATE 8
API	1509300524
LOCATION	SEC. 23, T26S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	501011
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2688
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	409
OPEN FLOW, MCFD	2587

COMPONENT, MOLE PCT	
METHANE	73.0
ETHANE	6.5
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.5
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,021
SPECIFIC GRAVITY	0.714

SAMPLE	20302
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	MASONIC HOME 2
API	1509300468
LOCATION	SEC. 6, T26S, R35W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	380928
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2690
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	430
OPEN FLOW, MCFD	7090

COMPONENT, MOLE PCT	
METHANE	72.5
ETHANE	6.4
PROPANE	3.2
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.3
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,009
SPECIFIC GRAVITY	0.715

* CALCULATED GROSS BTU PER CU. FT. DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20310	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	73.1
COUNTY	KEARNY	ETHANE	6.5
FIELD	HUGOTON	PROPANE	3.3
WELL NAME	TATE 9-I	N-BUTANE	1.0
API	1509321032	ISOBUTANE	0.4
LOCATION	SEC. 26, T26S, R36W	N-PENTANE	0.2
OWNER	WILLIAMS PRODUCTION RMT CO.	ISOPENTANE	0.2
COMPLETED	900724	CYCLOPENTANE	--
SAMPLED	000620	HEXANES PLUS	0.2
FORMATION	PERM-CHASE GROUP	NITROGEN	14.6
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2773	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	177	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	670	CARBON DIOXIDE	TRACE
		HELIUM	0.40
		HEATING VALUE*	1,019
		SPECIFIC GRAVITY	0.713

SAMPLE	20282	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	72.4
COUNTY	KEARNY	ETHANE	6.7
FIELD	HUGOTON	PROPANE	4.0
WELL NAME	WHITE 2-2	N-BUTANE	1.1
API	1509321509	ISOBUTANE	0.4
LOCATION	SEC. 12, T26S, R35W	N-PENTANE	0.3
OWNER	CIMAREX ENERGY CO.	ISOPENTANE	0.2
COMPLETED	960728	CYCLOPENTANE	--
SAMPLED	000612	HEXANES PLUS	0.3
FORMATION	PERM-CHASE GROUP	NITROGEN	14.0
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.1
TRUE VERTICAL DEPTH (FT)	2692	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	118	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	287	CARBON DIOXIDE	0.1
		HELIUM	0.40
		HEATING VALUE*	1,046
		SPECIFIC GRAVITY	0.725

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20300
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	MASONIC HOME 2-I
API	1509321264
LOCATION	SEC. 6, T26S, R35W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	930710
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2716
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	153
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	72.3
ETHANE	6.5
PROPANE	3.6
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.2
NITROGEN	15.1
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,018
SPECIFIC GRAVITY	0.718

SAMPLE	20306
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	TATE 4
API	1509300512
LOCATION	SEC. 11, T26S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	491130
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2627
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	406
OPEN FLOW, MCFD	2300

COMPONENT, MOLE PCT	
METHANE	72.5
ETHANE	6.5
PROPANE	3.5
N-BUTANE	1.1
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.2
NITROGEN	14.8
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,023
SPECIFIC GRAVITY	0.718

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20298
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	MASONIC HOME 6
API	1509300501
LOCATION	SEC. 2, T26S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	471022
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2720
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	386
OPEN FLOW, MCFD	3240

COMPONENT, MOLE PCT	
METHANE	72.7
ETHANE	6.5
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.1
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,011
SPECIFIC GRAVITY	0.714

SAMPLE	20299
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	MASONIC HOME 9
API	1509300469
LOCATION	SEC. 6, T26S, R35W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	620619
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2688
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	353
OPEN FLOW, MCFD	13700

COMPONENT, MOLE PCT	
METHANE	72.6
ETHANE	6.5
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.2
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,011
SPECIFIC GRAVITY	0.715

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20295
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	LEE 6-I
API	1509320927
LOCATION	SEC. 27, T25S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	880329
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2676
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	153
OPEN FLOW, MCFD	701

COMPONENT, MOLE PCT	
METHANE	72.7
ETHANE	6.5
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.8
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,017
SPECIFIC GRAVITY	0.715

SAMPLE	20331
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	JOHNSON 3
API	1509300319
LOCATION	SEC. 18, T25S, R36W
OWNER	OSBORN HEIRS CO.
COMPLETED	481103
SAMPLED	000620
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2500
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	40
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	72.6
ETHANE	6.7
PROPANE	3.6
N-BUTANE	1.1
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.5
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,029
SPECIFIC GRAVITY	0.719

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20272
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	CB & I NO. 8
API	1509300483
LOCATION	SEC. 22, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	480116
SAMPLED	000612
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2699
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	413
OPEN FLOW, MCFD	208

COMPONENT, MOLE PCT	
METHANE	72.0
ETHANE	6.4
PROPANE	3.5
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.2
NITROGEN	15.6
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,011
SPECIFIC GRAVITY	0.718

SAMPLE	20275
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	CB & I NO. 9
API	1509300473
LOCATION	SEC. 10, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	480116
SAMPLED	000612
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2750
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	419
OPEN FLOW, MCFD	79

COMPONENT, MOLE PCT	
METHANE	72.1
ETHANE	6.4
PROPANE	3.5
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.2
NITROGEN	15.6
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,007
SPECIFIC GRAVITY	0.717

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20274
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	CB & LB 11-2
API	1509321610
LOCATION	SEC. 15, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	980209
SAMPLED	000612
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2676
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	109
OPEN FLOW, MCFD	154

COMPONENT, MOLE PCT	
METHANE	72.1
ETHANE	6.5
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.2
NITROGEN	15.4
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,012
SPECIFIC GRAVITY	0.718

SAMPLE	20284
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	WHITE 1
API	1509300472
LOCATION	SEC. 9, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	450703
SAMPLED	000612
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2704
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	183

COMPONENT, MOLE PCT	
METHANE	71.9
ETHANE	6.5
PROPANE	3.5
N-BUTANE	1.1
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.3
NITROGEN	15.4
OXYGEN	TRACE
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,019
SPECIFIC GRAVITY	0.722

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20276
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	CB & L NO. 10
API	1509300474
LOCATION	SEC. 11, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	480116
SAMPLED	000612
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2742
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	412
OPEN FLOW, MCFD	119

COMPONENT, MOLE PCT	
METHANE	72.2
ETHANE	6.4
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.6
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,006
SPECIFIC GRAVITY	0.716

SAMPLE	20278
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	CB & L 1-2
API	1509321557
LOCATION	SEC. 14, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	970302
SAMPLED	000612
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2676
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	120
OPEN FLOW, MCFD	297

COMPONENT, MOLE PCT	
METHANE	72.2
ETHANE	6.5
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.5
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.42
HEATING VALUE*	1,008
SPECIFIC GRAVITY	0.716

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20277
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	CB & L NO. 11
API	1509300478
LOCATION	SEC. 15, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	450221
SAMPLED	000612
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERT CAL DEPTH (FT)	2720
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	421
OPEN FLOW, MCFD	256

COMPONENT, MOLE PCT	
METHANE	72.2
ETHANE	6.4
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.7
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.42
HEATING VALUE*	1,004
SPECIFIC GRAVITY	0.716

SAMPLE	20281
STATE	KANSAS
COUNTY	KEARNY
FIELD	HUGOTON
WELL NAME	WHITE 2
API	1509300475
LOCATION	SEC. 12, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	480116
SAMPLED	000612
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2714
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	406
OPEN FLOW, MCFD	223

COMPONENT, MOLE PCT	
METHANE	71.8
ETHANE	6.4
PROPANE	3.5
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.8
OXYGEN	TRACE
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.42
HEATING VALUE*	1,009
SPECIFIC GRAVITY	0.719

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY.
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20333
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	MASONIC HOME 2-2
API	1509320640
LOCATION	SEC. 6, T26S, R35W
OWNER	SAMEDAN OIL CORP.
COMPLETED	791103
SAMPLED	000620
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2852
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	71.0
ETHANE	6.4
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	16.5
OXYGEN	0.3
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.39
HEATING VALUE*	995
SPECIFIC GRAVITY	0.722

SAMPLE	20286
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	HILLYARD A-4
API	1509320202
LOCATION	SEC. 20, T26S, R36W
OWNER	CIMAREX ENERGY CO.
COMPLETED	751014
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2812
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	139

COMPONENT, MOLE PCT	
METHANE	73.1
ETHANE	6.7
PROPANE	3.8
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	13.9
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.39
HEATING VALUE*	1,035
SPECIFIC GRAVITY	0.717

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20297
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	MASONIC HOME 4-2
API	1509320304
LOCATION	SEC. 35, T25S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	760714
SAMPLED	000620
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2796
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	199
OPEN FLOW, MCFD	1200

COMPONENT, MOLE PCT	
METHANE	72.8
ETHANE	6.5
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.9
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,013
SPECIFIC GRAVITY	0.714

SAMPLE	20309
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	TATE 8-2
API	1509320216
LOCATION	SEC. 23, T26S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	751229
SAMPLED	000620
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2855
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	216
OPEN FLOW, MCFD	2600

COMPONENT, MOLE PCT	
METHANE	72.8
ETHANE	6.5
PROPANE	3.5
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.6
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,022
SPECIFIC GRAVITY	0.715

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20330
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	JOHNSON 4A
API	1509320092
LOCATION	SEC. 19, T25S, R36W
OWNER	OSBORN HEIRS CO.
COMPLETED	731128
SAMPLED	000619
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2770
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	36
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	72.7
ETHANE	6.7
PROPANE	3.8
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.3
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,035
SPECIFIC GRAVITY	0.719

SAMPLE	20304
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	TATE 3-2
API	1509320218
LOCATION	SEC. 13, T26S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	751229
SAMPLED	000620
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2803
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	223
OPEN FLOW, MCFD	2000

COMPONENT, MOLE PCT	
METHANE	72.3
ETHANE	6.5
PROPANE	3.4
N-BUTANE	1.1
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	15.1
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,024
SPECIFIC GRAVITY	0.721

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20296
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	RODERICK 3-2
API	1509320305
LOCATION	SEC. 26, T25S, R36W
OWNER	WILLIAMS PRODUCTION RMT CO.
COMPLETED	760721
SAMPLED	000620
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2798
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	207
OPEN FLOW, MCFD	1057

COMPONENT, MOLE PCT	
METHANE	72.7
ETHANE	6.5
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.0
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.40
HEATING VALUE*	1,012
SPECIFIC GRAVITY	0.713

SAMPLE	20285
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	WHITE A-2
API	1509320457
LOCATION	SEC. 9, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	780111
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2962
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	126

COMPONENT, MOLE PCT	
METHANE	71.3
ETHANE	6.6
PROPANE	3.7
N-BUTANE	1.3
ISOBUTANE	0.5
N-PENTANE	0.4
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	15.1
OXYGEN	TRACE
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,045
SPECIFIC GRAVITY	0.734

* CALCULATED GROSS BTU PER CU FT DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20334
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	TATE 4-2
API	1509320697
LOCATION	SEC. 11, T26S, R36W
OWNER	SAMEDAN OIL CORP.
COMPLETED	800818
SAMPLED	000620
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2806
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	72.5
ETHANE	6.5
PROPANE	3.5
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	14.9
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,020
SPECIFIC GRAVITY	0.717

SAMPLE	20332
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	MASONIC HOME 9-2
API	1509320639
LOCATION	SEC. 6, T26S, R35W
OWNER	SAMEDAN OIL CORP.
COMPLETED	800605
SAMPLED	000620
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2830
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	2050

COMPONENT, MOLE PCT	
METHANE	72.3
ETHANE	6.5
PROPANE	3.5
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.3
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,012
SPECIFIC GRAVITY	0.716

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20279
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	CB & L B-3
API	1509320415
LOCATION	SEC. 14, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	770816
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2886
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	161

COMPONENT, MOLE PCT	
METHANE	71.9
ETHANE	6.4
PROPANE	3.5
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.6
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,013
SPECIFIC GRAVITY	0.72

SAMPLE	20273
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	CB & LB C-1
API	1509320518
LOCATION	SEC. 15, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	780710
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2930
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	143

COMPONENT, MOLE PCT	
METHANE	71.9
ETHANE	6.5
PROPANE	3.5
N-BUTANE	1.1
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	15.4
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.41
HEATING VALUE*	1,016
SPECIFIC GRAVITY	0.721

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20270
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	C B & L B-6
API	1509320434
LOCATION	SEC. 24, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	771122
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2792
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	206

COMPONENT, MOLE PCT	
METHANE	72.0
ETHANE	6.4
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.7
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.42
HEATING VALUE*	1,007
SPECIFIC GRAVITY	0.718

SAMPLE	20283
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	WHITE A-1
API	1509320447
LOCATION	SEC. 12, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	771122
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2888
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	113

COMPONENT, MOLE PCT	
METHANE	71.8
ETHANE	6.4
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.7
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.42
HEATING VALUE*	1,007
SPECIFIC GRAVITY	0.719

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20271
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	CITIZEN BLDG. B-7
API	1509320435
LOCATION	SEC. 35, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	771107
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2949
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	132

COMPONENT, MOLE PCT	
METHANE	72.1
ETHANE	6.3
PROPANE	3.4
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.9
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.42
HEATING VALUE*	1,003
SPECIFIC GRAVITY	0.717

SAMPLE	20280
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	WHITE A-3
API	1509320553
LOCATION	SEC. 13, T26S, R35W
OWNER	CIMAREX ENERGY CO.
COMPLETED	781130
SAMPLED	000612
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2873
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	157

COMPONENT, MOLE PCT	
METHANE	71.7
ETHANE	6.3
PROPANE	3.4
N-BUTANE	0.9
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	16.2
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.42
HEATING VALUE*	998
SPECIFIC GRAVITY	0.717

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20290
STATE	KANSAS
COUNTY	KEARNY
FIELD	PANOMA
WELL NAME	ZIBELL 1
API	1509320258
LOCATION	SEC. 10, T22S, R36W
OWNER	CONTINENTAL ENERGY CORP.
COMPLETED	781120
SAMPLED	000614
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2978
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	67.9
ETHANE	5.8
PROPANE	3.1
N-BUTANE	0.9
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	20.8
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.0
HELIUM	0.54
HEATING VALUE*	937
SPECIFIC GRAVITY	0.727

SAMPLE	20144
STATE	KANSAS
COUNTY	MORTON
FIELD	INTERSTATE
WELL NAME	INTERSTATE B2-18
API	1512920400
LOCATION	SEC. 18, T34S, R43W
OWNER	EDGAR W. WHITE
COMPLETED	800604
SAMPLED	000502
FORMATION	PERM-RED CAVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2564
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	62.3
ETHANE	5.5
PROPANE	3.3
N-BUTANE	1.0
ISOBUTANE	0.3
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	25.7
OXYGEN	0.1
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.2
HELIUM	0.62
HEATING VALUE*	903
SPECIFIC GRAVITY	0.76

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20045
STATE	KANSAS
COUNTY	MORTON
FIELD	INTERSTATE
WELL NAME	NTERSTATE NO. D3-9
API	1512930085
LOCATION	SEC 9, T34S, R43W
OWNER	BEARTOOTH OIL & GAS CO.
COMPLETED	651202
SAMPLED	000200
FORMATION	PERM-RED CAVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	1358
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	170
OPEN FLOW, MCFD	80

COMPONENT, MOLE PCT	
METHANE	51.6
ETHANE	1.7
PROPANE	1.2
N-BUTANE	1.2
ISOBUTANE	0.1
N-PENTANE	0.2
ISOPENTANE	0.5
CYCLOPENTANE	--
HEXANES PLUS	0.6
NITROGEN	41.4
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.5
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.89
HEATING VALUE*	689
SPECIFIC GRAVITY	0.788

SAMPLE	20145
STATE	KANSAS
COUNTY	MORTON
FIELD	INTERSTATE
WELL NAME	INTERSTATE RED CAVE 1
API	1512920339
LOCATION	SEC. 18, T34S, R43W
OWNER	EDGAR W. WHITE
COMPLETED	780313
SAMPLED	000501
FORMATION	PERM-RED CAVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	1292
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	140

COMPONENT, MOLE PCT	
METHANE	52.7
ETHANE	2.4
PROPANE	1.6
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	39.6
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.5
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.96
HEATING VALUE*	705
SPECIFIC GRAVITY	0.779

* CALCULATED GROSS BTU PER CU. FT. DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20148	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	65.6
COUNTY	MORTON	ETHANE	6.7
FIELD	GREENWOOD	PROPANE	4.5
WELL NAME	MCCLAIN 2-33	N-BUTANE	1.5
API	1512920620	ISOBUTANE	0.5
LOCATION	SEC. 33, T33S, R42W	N-PENTANE	0.5
OWNER	NADEL & GUSSMAN, LLC	ISOPENTANE	0.4
COMPLETED	820317	CYCLOPENTANE	--
SAMPLED	000502	HEXANES PLUS	0.8
FORMATION	PENN-SHAWNEE	NITROGEN	18.8
GEOLOGIC PROVINCE CODE	360	OXYGEN	TRACE
TRUE VERTICAL DEPTH (FT)	3104	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	473	CARBON DIOXIDE	0.1
		HELIUM	0.49
		HEATING VALUE*	1,050
		SPECIFIC GRAVITY	0.777

SAMPLE	20176	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	62.9
COUNTY	MORTON	ETHANE	6.5
FIELD	GREENWOOD	PROPANE	4.2
WELL NAME	CENTRAL LIFE 1-32	N-BUTANE	1.6
API	1512910350	ISOBUTANE	0.5
LOCATION	SEC. 32, T34S, R42W	N-PENTANE	0.6
OWNER	NADEL & GUSSMAN, LLC	ISOPENTANE	0.4
COMPLETED	551214	CYCLOPENTANE	--
SAMPLED	000509	HEXANES PLUS	0.6
FORMATION	PENN-TOPEKA	NITROGEN	22.0
GEOLOGIC PROVINCE CODE	360	OXYGEN	TRACE
TRUE VERTICAL DEPTH (FT)	3646	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	5000	CARBON DIOXIDE	0.2
		HELIUM	0.60
		HEATING VALUE*	1,005
		SPECIFIC GRAVITY	0.783

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20146
STATE	KANSAS
COUNTY	MORTON
FIELD	GREENWOOD
WELL NAME	INTERSTATE A1
API	1512920377
LOCATION	SEC. 19, T34S, R43W
OWNER	EDGAR W. WHITE
COMPLETED	900115
SAMPLED	000501
FORMATION	PENN-TOPEKA
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2720
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	90

COMPONENT, MOLE PCT	
METHANE	63.1
ETHANE	5.9
PROPANE	3.6
N-BUTANE	1.0
ISOBUTANE	0.3
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	24.4
OXYGEN	0.1
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.64
HEATING VALUE*	924
SPECIFIC GRAVITY	0.757

SAMPLE	20041
STATE	KANSAS
COUNTY	MORTON
FIELD	GREENWOOD
WELL NAME	INTERSTATE NO. 1-11
API	1512910513
LOCATION	SEC 11, T34S, R43W
OWNER	BEARTOOTH OIL & GAS CO.
COMPLETED	550601
SAMPLED	991202
FORMATION	PENN-WABAUNSEE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2955
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	426
OPEN FLOW, MCFD	5129

COMPONENT, MOLE PCT	
METHANE	66.0
ETHANE	5.7
PROPANE	3.7
N-BUTANE	1.5
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	21.1
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	TRACE
CARBON DIOXIDE	0.1
HELIUM	0.48
HEATING VALUE*	980
SPECIFIC GRAVITY	0.757

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHE T AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20191	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	63.7
COUNTY	MORTON	ETHANE	6.8
FIELD	GREENWOOD	PROPANE	4.5
WELL NAME	UNION 1-4	N-BUTANE	1.7
API	1512910371	ISOBUTANE	0.5
LOCATION	SEC. 4, T34S, R42W	N-PENTANE	0.6
OWNER	NADEL & GUSSMAN, LLC	ISOPENTANE	0.4
COMPLETED	550515	CYCLOPENTANE	--
SAMPLED	000509	HEXANES PLUS	0.7
FORMATION	PENN-WABAUNSEE	NITROGEN	20.4
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2537	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	34050	CARBON D OXIDE	0.1
		HELIUM	0.53
		HEATING VALUE*	1,039
		SPECIFIC GRAVITY	0.786

SAMPLE	20758	COMPONENT, MOLE PCT	
STATE	KANSAS	METHANE	65.1
COUNTY	MORTON	ETHANE	6.2
FIELD	GREENWOOD	PROPANE	3.8
WELL NAME	INTERSTATE NO. 1-11	N-BUTANE	1.3
API	1512910513	ISOBUTANE	0.4
LOCATION	SEC. 11, T34S, R43W	N-PENTANE	0.4
OWNER	BEARTOOTH OIL & GAS CO.	ISOPENTANE	0.3
COMPLETED	550601	CYCLOPENTANE	--
SAMPLED	010731	HEXANES PLUS	0.5
FORMATION	PENN-WABAUNSEE	NITROGEN	21.4
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2955	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	426	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	5129	CARBON DIOXIDE	0.1
		HELIUM	0.55
		HEATING VALUE*	969
		SPECIFIC GRAVITY	0.757

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20040
STATE	KANSAS
COUNTY	MORTON
FIELD	BERRYMAN
WELL NAME	CMT NO. 1-20
API	1512920006
LOCATION	SEC 20, T33S, R41W
OWNER	BEARTOOTH OIL & GAS CO.
COMPLETED	800722
SAMPLED	991202
FORMATION	PENN-WABAUNSEE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2960
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	231
OPEN FLOW, MCFD	104

COMPONENT, MOLE PCT	
METHANE	65.1
ETHANE	5.3
PROPANE	3.0
N-BUTANE	1.1
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	23.8
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.61
HEATING VALUE*	906
SPECIFIC GRAVITY	0.742

SAMPLE	20761
STATE	KANSAS
COUNTY	MORTON
FIELD	BERRYMAN
WELL NAME	CMT NO. 1-20
API	1512920006
LOCATION	SEC. 20, T33S, R41W
OWNER	BEARTOOTH OIL & GAS CO.
COMPLETED	800722
SAMPLED	010801
FORMATION	PENN-WABAUNSEE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2960
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	231
OPEN FLOW, MCFD	104

COMPONENT, MOLE PCT	
METHANE	64.5
ETHANE	5.5
PROPANE	2.9
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	24.7
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.65
HEATING VALUE*	882
SPECIFIC GRAVITY	0.737

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20427
STATE	KANSAS
COUNTY	SEWARD
FIELD	HITCH
WELL NAME	HITCH 1-36
API	1517520961
LOCATION	SEC. 36, T32S, R34W
OWNER	BEREXCO, INC.
COMPLETED	870722
SAMPLED	001107
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	5706
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	30
OPEN FLOW, MCFD	2000

COMPONENT, MOLE PCT	
METHANE	68.1
ETHANE	9.1
PROPANE	8.8
N-BUTANE	3.3
ISOBUTANE	1.3
N-PENTANE	1.0
ISOPENTANE	0.6
CYCLOPENTANE	–
HEXANES PLUS	1.3
NITROGEN	5.7
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.5
HELIUM	0.11
HEATING VALUE*	1,358
SPECIFIC GRAVITY	0.852

SAMPLE	20358
STATE	KANSAS
COUNTY	STEVENS
FIELD	WIDE AWAKE
WELL NAME	BAKER 1-3
API	1518920860
LOCATION	SEC. 3, T35S, R35W
OWNER	QUINQUE OPERATING CO.
COMPLETED	850829
SAMPLED	000711
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	6272
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	50

COMPONENT, MOLE PCT	
METHANE	83.9
ETHANE	5.1
PROPANE	2.8
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.4
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	5.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.20
HEATING VALUE*	1,101
SPECIFIC GRAVITY	0.673

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20357
STATE	KANSAS
COUNTY	STEVENS
FIELD	WIDE AWAKE
WELL NAME	GRIZZEL NO. 1
API	1518920928
LOCATION	SEC. 3, T35S, R35W
OWNER	AMERICAN WARRIOR, INC.
COMPLETED	861101
SAMPLED	000711
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	6522
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	2117

COMPONENT, MOLE PCT	
METHANE	83.8
ETHANE	5.0
PROPANE	2.7
N-BUTANE	0.9
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	5.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.5
HELIUM	0.21
HEATING VALUE*	1,089
SPECIFIC GRAVITY	0.67

SAMPLE	20356
STATE	KANSAS
COUNTY	STEVENS
FIELD	WIDE AWAKE
WELL NAME	BAKER 2-3
API	1518920949
LOCATION	SEC. 3, T35S, R35W
OWNER	QUINQUE OPERATING CO.
COMPLETED	870402
SAMPLED	000711
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	6254
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	20

COMPONENT, MOLE PCT	
METHANE	82.9
ETHANE	5.1
PROPANE	2.9
N-BUTANE	1.2
ISOBUTANE	0.5
N-PENTANE	0.5
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	5.7
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.21
HEATING VALUE*	1,107
SPECIFIC GRAVITY	0.682

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20408
STATE	NEW MEXICO
COUNTY	CATRON
FIELD	WILDCAT
WELL NAME	STATE 1-4 NO. 1
API	3000320019
LOCATION	SEC. 4, T1N, R21W
OWNER	RIDGEWAY ARIZONA OIL CORP.
COMPLETED	
SAMPLED	000828
FORMATION	PERM-EORT APACHE
GEOLOGIC PROVINCE CODE	475
TRUE VERTICAL DEPTH (FT)	1783
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	318
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	0.1
ETHANE	0.1
PROPANE	TRACE
N-BUTANE	TRACE
ISOBUTANE	0.0
N-PENTANE	TRACE
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	0.0
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	99.4
HELIUM	0.20
HEATING VALUE*	6
SPECIFIC GRAVITY	1.515

SAMPLE	20566
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	HELEN COLLINS FEDERAL NO. 3
API	3000562072
LOCATION	SEC. 9, T7S, R26E
OWNER	PECOS RIVER OPERATING, INC.
COMPLETED	831211
SAMPLED	001220
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4156
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	962
OPEN FLOW, MCFD	2440

COMPONENT, MOLE PCT	
METHANE	85.0
ETHANE	5.1
PROPANE	2.0
N-BUTANE	0.8
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.7
NITROGEN	4.9
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.3
HELIUM	0.33
HEATING VALUE*	1,094
SPECIFIC GRAVITY	0.666

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20567	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.8
COUNTY	CHAVES	ETHANE	4.5
FIELD	PECOS SLOPE	PROPANE	1.6
WELL NAME	HELEN COLLINS FEDERAL NO. 6	N-BUTANE	0.6
API	3000562139	ISOBUTANE	0.3
LOCATION	SEC. 4, T7S, R26E	N-PENTANE	0.2
OWNER	PECOS RIVER OPERATING, INC.	ISOPENTANE	0.2
COMPLETED	840518	CYCLOPENTANE	--
SAMPLED	001220	HEXANES PLUS	0.5
FORMATION	PERM-ABO	NITROGEN	5.0
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4271	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	739	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1455	CARBON DIOXIDE	0.1
		HELIUM	0.34
		HEATING VALUE*	1,062
		SPECIFIC GRAVITY	0.643

SAMPLE	20586	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	87.7
COUNTY	CHAVES	ETHANE	5.4
FIELD	PECOS SLOPE S.	PROPANE	1.8
WELL NAME	PENJACK FEDERAL NO. 6	N-BUTANE	0.5
API	3000562562	ISOBUTANE	0.2
LOCATION	SEC. 7, T10S, R26E	N-PENTANE	0.1
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.1
COMPLETED	871209	CYCLOPENTANE	--
SAMPLED	010228	HEXANES PLUS	0.1
FORMATION	PERM-ABO	NITROGEN	3.6
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4428	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	970	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1193	CARBON DIOXIDE	TRACE
		HELIUM	0.34
		HEATING VALUE*	1,068
		SPECIFIC GRAVITY	0.631

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20563	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.8
COUNTY	CHAVES	ETHANE	4.7
FIELD	PECOS SLOPE	PROPANE	1.7
WELL NAME	SUN FEDERAL NO. 4	N-BUTANE	0.6
API	3000561596	ISOBUTANE	0.3
LOCATION	SEC. 28, T7S, R26E	N-PENTANE	0.2
OWNER	PECOS RIVER OPERATING, INC.	ISOPENTANE	0.2
COMPLETED	820629	CYCLOPENTANE	--
SAMPLED	001220	HEXANES PLUS	0.4
FORMATION	PERM-ABO	NITROGEN	4.8
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4472	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	1079	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	873	CARBON DIOXIDE	TRACE
		HELIUM	0.35
		HEATING VALUE*	1,066
		SPECIFIC GRAVITY	0.643

SAMPLE	20548	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.1
COUNTY	CHAVES	ETHANE	4.9
FIELD	PECOS SLOPE	PROPANE	1.8
WELL NAME	NICHOLS DALE FEDERAL NO. 5	N-BUTANE	0.6
API	3000561806	ISOBUTANE	0.3
LOCATION	SEC. 33, T7S, R26E	N-PENTANE	0.2
OWNER	PECOS RIVER OPERATING, INC.	ISOPENTANE	0.2
COMPLETED	821112	CYCLOPENTANE	--
SAMPLED	001219	HEXANES PLUS	0.5
FORMATION	PERM-ABO	NITROGEN	5.0
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4197	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	909	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1321	CARBON DIOXIDE	0.1
		HELIUM	0.35
		HEATING VALUE*	1,069
		SPECIFIC GRAVITY	0.649

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20560
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	VANCE FED. A NO. 1
API	3000561509
LOCATION	SEC. 34, T7S, R26E
OWNER	EXCO RESOURCES, INC.
COMPLETED	820624
SAMPLED	001220
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4508
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	891
OPEN FLOW, MCFD	2527

COMPONENT, MOLE PCT	
METHANE	86.9
ETHANE	4.7
PROPANE	1.7
N-BUTANE	0.6
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	4.7
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.36
HEATING VALUE*	1,064
SPECIFIC GRAVITY	0.641

SAMPLE	20547
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	NICHOLS DALE FEDERAL NO. 6
API	3000561854
LOCATION	SEC. 33, T7S, R26E
OWNER	PECOS RIVER OPERATING, INC.
COMPLETED	821229
SAMPLED	001219
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4319
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	832
OPEN FLOW, MCFD	547

COMPONENT, MOLE PCT	
METHANE	86.1
ETHANE	4.8
PROPANE	1.7
N-BUTANE	0.6
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	5.4
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.37
HEATING VALUE*	1,060
SPECIFIC GRAVITY	0.645

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20602	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.1
COUNTY	CHAVES	ETHANE	5.9
FIELD	PECOS SLOPE S	PROPANE	2.1
WELL NAME	PENJACK FEDERAL NO. 2	N-BUTANE	0.5
API	3000562465	ISOBUTANE	0.3
LOCATION	SEC. 12, T10S, R25E	N-PENTANE	0.1
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.1
COMPLETED	870428	CYCLOPENTANE	--
SAMPLED	010228	HEXANES PLUS	0.1
FORMATION	PERM-ABO	NITROGEN	4.3
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4421	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	980	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1600	CARBON DIOXIDE	0.0
		HELIUM	0.38
		HEATING VALUE*	1,070
		SPECIFIC GRAVITY	0.64

SAMPLE	20562	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.4
COUNTY	CHAVES	ETHANE	4.8
FIELD	PECOS SLOPE	PROPANE	1.7
WELL NAME	VANCE FED. A NO. 2	N-BUTANE	0.6
API	3000561762	ISOBUTANE	0.3
LOCATION	SEC. 34, T7S, R26E	N-PENTANE	0.2
OWNER	EXCO RESOURCES, INC.	ISOPENTANE	0.2
COMPLETED	821028	CYCLOPENTANE	--
SAMPLED	001220	HEXANES PLUS	0.4
FORMATION	PERM-ABO	NITROGEN	5.0
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4398	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	983	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	6024	CARBON DIOXIDE	0.1
		HELIUM	0.38
		HEATING VALUE*	1,064
		SPECIFIC GRAVITY	0.644

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20552
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	VANCE FED. NO. 3
API	3000561508
LOCATION	SEC. 26, T7S, R26E
OWNER	EXCO RESOURCES, INC.
COMPLETED	820709
SAMPLED	001220
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4556
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	865
OPEN FLOW, MCFD	1753

COMPONENT, MOLE PCT	
METHANE	86.6
ETHANE	4.7
PROPANE	1.7
N-BUTANE	0.6
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	5.0
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.39
HEATING VALUE*	1,064
SPECIFIC GRAVITY	0.643

SAMPLE	20573
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	O'CONNELL FEDERAL COM NO. 1
API	3000562740
LOCATION	SEC. 15, T6S, R26E
OWNER	PECOS RIVER OPERATING, INC.
COMPLETED	891228
SAMPLED	001221
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4150
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	800
OPEN FLOW, MCFD	1772

COMPONENT, MOLE PCT	
METHANE	83.7
ETHANE	5.0
PROPANE	2.0
N-BUTANE	0.7
ISOBUTANE	0.3
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	6.9
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.46
HEATING VALUE*	1,055
SPECIFIC GRAVITY	0.659

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20608	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	87.0
COUNTY	CHAVES	ETHANE	4.8
FIELD	PECOS SLOPE S	PROPANE	1.7
WELL NAME	PENJACK FEDERAL NO. 1	N-BUTANE	0.5
API	3000560531	ISOBUTANE	0.3
LOCATION	SEC. 6, T10S, R26E	N-PENTANE	0.1
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.1
COMPLETED	790208	CYCLOPENTANE	--
SAMPLED	010228	HEXANES PLUS	0.1
FORMATION	PERM-ABO	NITROGEN	4.8
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4334	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	961	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1272	CARBON DIOXIDE	0.0
		HELIUM	0.47
		HEATING VALUE*	1,050
		SPECIFIC GRAVITY	0.633

SAMPLE	20603	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.2
COUNTY	CHAVES	ETHANE	4.9
FIELD	PECOS SLOPE S	PROPANE	1.8
WELL NAME	JJ FEDERAL COM. 2	N-BUTANE	0.6
API	3000562678	ISOBUTANE	0.3
LOCATION	SEC. 1, T10S, R25E	N-PENTANE	0.2
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.1
COMPLETED	890509	CYCLOPENTANE	--
SAMPLED	010228	HEXANES PLUS	0.2
FORMATION	PERM-ABO	NITROGEN	5.3
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4307	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	972	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	4000	CARBON DIOXIDE	0.0
		HELIUM	0.49
		HEATING VALUE*	1,053
		SPECIFIC GRAVITY	0.64

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20536
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	COBIE-EBEID FEDERAL COM NO. 1
API	3000561350
LOCATION	SEC. 13, T8S, R25E
OWNER	PECOS RIVER OPERATING, INC.
COMPLETED	820227
SAMPLED	001219
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4164
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	955
OPEN FLOW, MCFD	1304

COMPONENT, MOLE PCT	
METHANE	82.6
ETHANE	4.3
PROPANE	1.6
N-BUTANE	0.6
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	9.3
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.1
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.50
HEATING VALUE*	1,007
SPECIFIC GRAVITY	0.654

SAMPLE	20534
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	PECOS SLOPE 24 FEDERAL NO. 1
API	3000563043
LOCATION	SEC. 24, T8S, R25E
OWNER	MEWBOURNE OIL CO.
COMPLETED	950408
SAMPLED	001218
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4270
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	195

COMPONENT, MOLE PCT	
METHANE	81.8
ETHANE	4.5
PROPANE	1.8
N-BUTANE	0.6
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	9.7
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.61
HEATING VALUE*	1,008
SPECIFIC GRAVITY	0.658

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20536
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	COBIE-EBEID FEDERAL COM NO. 2
API	3000561873
LOCATION	SEC. 13, T8S, R25E
OWNER	PECOS RIVER OPERATING, INC.
COMPLETED	830216
SAMPLED	001219
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3892
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	771
OPEN FLOW, MCFD	881

COMPONENT, MOLE PCT	
METHANE	81.4
ETHANE	4.3
PROPANE	1.7
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	10.1
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.62
HEATING VALUE*	1,009
SPECIFIC GRAVITY	0.663

SAMPLE	20604
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE S
WELL NAME	MM FEDERAL NO. 7
API	3000562493
LOCATION	SEC. 25, T9S, R25E
OWNER	CHESAPEAKE OPERATING, INC.
COMPLETED	870730
SAMPLED	010228
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4298
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	934
OPEN FLOW, MCFD	598

COMPONENT, MOLE PCT	
METHANE	86.7
ETHANE	4.0
PROPANE	1.1
N-BUTANE	0.3
ISOBUTANE	0.1
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	6.7
OXYGEN	0.0
ARGON	0.1
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.64
HEATING VALUE*	1,005
SPECIFIC GRAVITY	0.624

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20605	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	84.1
COUNTY	CHAVES	ETHANE	4.5
FIELD	PECOS SLOPE S	PROPANE	1.6
WELL NAME	RICK FEDERAL COM. 1	N-BUTANE	0.6
API	3000562215	ISOBUTANE	0.3
LOCATION	SEC. 26, T9S, R25E	N-PENTANE	0.2
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.1
COMPLETED	841220	CYCLOPENTANE	--
SAMPLED	010228	HEXANES PLUS	0.2
FORMATION	PERM-ABO	NITROGEN	7.7
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4104	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1870	CARBON DIOXIDE	TRACE
		HELIUM	0.66
		HEATING VALUE*	1,022
		SPECIFIC GRAVITY	0.646

SAMPLE	20514	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	82.7
COUNTY	CHAVES	ETHANE	4.4
FIELD	PECOS SLOPE	PROPANE	1.7
WELL NAME	COYOTE FEDERAL NO. 3	N-BUTANE	0.6
API	3000561099	ISOBUTANE	0.3
LOCATION	SEC. 7, T8S, R25E	N-PENTANE	0.3
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.1
COMPLETED	820226	CYCLOPENTANE	--
SAMPLED	001207	HEXANES PLUS	0.6
FORMATION	PERM-ABO	NITROGEN	8.6
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3589	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	875	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1546	CARBON DIOXIDE	TRACE
		HELIUM	0.77
		HEATING VALUE*	1,029
		SPECIFIC GRAVITY	0.66

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20513	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	83.1
COUNTY	CHAVES	ETHANE	4.6
FIELD	PECOS SLOPE	PROPANE	1.7
WELL NAME	COYOTE FEDERAL NO. 4-Y	N-BUTANE	0.6
API	3000561880	ISOBUTANE	0.3
LOCATION	SEC. 7, T8S, R25E	N-PENTANE	0.3
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.2
COMPLETED	830208	CYCLOPENTANE	--
SAMPLED	001207	HEXANES PLUS	0.4
FORMATION	PERM-ABO	NITROGEN	7.9
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3711	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	826	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1129	CARBON DIOXIDE	TRACE
		HELIUM	0.77
		HEATING VALUE*	1,033
		SPECIFIC GRAVITY	0.657

SAMPLE	20606	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	83.5
COUNTY	CHAVES	ETHANE	4.3
FIELD	CHAVES CO. UNDESIGNATED	PROPANE	1.6
WELL NAME	PECOS RIVER FEDERAL NO. 1	N-BUTANE	0.5
API	3000561237	ISOBUTANE	0.3
LOCATION	SEC. 23, T9S, R25E	N-PENTANE	0.2
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.1
COMPLETED	820119	CYCLOPENTANE	--
SAMPLED	010228	HEXANES PLUS	0.2
FORMATION	PERM-ABO	NITROGEN	8.3
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4036	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	971	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1139	CARBON DIOXIDE	TRACE
		HELIUM	0.79
		HEATING VALUE*	1,009
		SPECIFIC GRAVITY	0.646

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20516
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	COYOTE FEDERAL NO. 1
API	3000560978
LOCATION	SEC. 1, T8S, R24E
OWNER	CHESAPEAKE OPERATING, INC.
COMPLETED	810721
SAMPLED	001207
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3760
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	7797

COMPONENT, MOLE PCT	
METHANE	82.9
ETHANE	4.5
PROPANE	1.7
N-BUTANE	0.7
ISOBUTANE	0.3
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	8.0
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIDXIDE	TRACE
HELIUM	0.80
HEATING VALUE*	1,036
SPECIFIC GRAVITY	0.66

SAMPLE	20515
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	PECOS SLOPE
WELL NAME	COYOTE FED. NO. 2
API	3000561100
LOCATION	SEC. 12, T8S, R24E
OWNER	CHESAPEAKE OPERATING, INC.
COMPLETED	811214
SAMPLED	001207
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3691
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	887
OPEN FLOW, MCFD	220

COMPONENT, MOLE PCT	
METHANE	81.6
ETHANE	4.4
PROPANE	1.7
N-BUTANE	0.6
ISOBUTANE	0.3
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	9.5
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.84
HEATING VALUE*	1,017
SPECIFIC GRAVITY	0.663

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20529	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	82.5
COUNTY	CHAVES	ETHANE	4.2
FIELD	PECOS SLOPE	PROPANE	1.4
WELL NAME	DANA FED. NO. 4	N-BUTANE	0.5
API	3000561810	ISOBUTANE	0.2
LOCATION	SEC. 3, T9S, R25E	N-PENTANE	0.4
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.2
COMPLETED	821111	CYCLOPENTANE	--
SAMPLED	001222	HEXANES PLUS	1.8
FORMATION	PERM-ABO	NITROGEN	7.7
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4007	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	1020	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	2055	CARBON DIOXIDE	TRACE
		HELIUM	0.97
		HEATING VALUE*	1,079
		SPECIFIC GRAVITY	0.684

SAMPLE	20528	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	84.2
COUNTY	CHAVES	ETHANE	4.7
FIELD	PECOS SLOPE	PROPANE	1.8
WELL NAME	DANA FED. NO. 3	N-BUTANE	0.7
API	3000561435	ISOBUTANE	0.3
LOCATION	SEC. 3, T9S, R25E	N-PENTANE	0.3
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.2
COMPLETED	820423	CYCLOPENTANE	--
SAMPLED	001218	HEXANES PLUS	0.3
FORMATION	PERM-ABO	NITROGEN	6.4
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4011	ARGON	0.1
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	1022	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1474	CARBON DIOXIDE	0.1
		HELIUM	0.97
		HEATING VALUE*	1,045
		SPECIFIC GRAVITY	0.65

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20500
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	BUFFALO VALLEY
WELL NAME	TANNER FEDERAL NO. 1
API	3000562701
LOCATION	SEC. 35, T14S, R27E
OWNER	SNOW OIL & GAS, INC.
COMPLETED	890824
SAMPLED	001206
FORMATION	PENN-ATOKA
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	8387
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	1839

COMPONENT, MOLE PCT	
METHANE	81.0
ETHANE	9.1
PROPANE	4.8
N-BUTANE	1.6
ISOBUTANE	0.7
N-PENTANE	0.5
ISOPENTANE	0.5
CYCLOPENTANE	–
HEXANES PLUS	0.9
NITROGEN	0.4
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.02
HEATING VALUE*	1,263
SPECIFIC GRAVITY	0.73

SAMPLE	20502
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	BUFFALO VALLEY
WELL NAME	ROSE FEDERAL NO. 4
API	3000561597
LOCATION	SEC. 13, T15S, 27E
OWNER	READ & STEVENS, INC.
COMPLETED	821206
SAMPLED	001206
FORMATION	PENN-ATOKA
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	8789
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1751
OPEN FLOW, MCFD	240

COMPONENT, MOLE PCT	
METHANE	87.4
ETHANE	7.3
PROPANE	2.5
N-BUTANE	0.6
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.6
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.03
HEATING VALUE*	1,150
SPECIFIC GRAVITY	0.656

* CALCULATED GROSS BTU PER CU.FT., DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20503
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	BUFFALO VALLEY
WELL NAME	HARRIS FEDERAL COM NO. 2
API	3000560277
LOCATION	SEC. 24, T15S, R27E
OWNER	READ & STEVENS, INC.
COMPLETED	740401
SAMPLED	001206
FORMATION	PENN-ATOKA
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	8807
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	700

COMPONENT, MOLE PCT	
METHANE	87.0
ETHANE	7.5
PROPANE	2.8
N-BUTANE	0.7
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.3
NITROGEN	0.6
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.3
HELIUM	0.03
HEATING VALUE*	1,150
SPECIFIC GRAVITY	0.656

SAMPLE	20504
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	DIAMOND MOUND
WELL NAME	MESA STATE COM NO. 3
API	3000562255
LOCATION	SEC. 31, T15S, R28E
OWNER	OCEAN ENERGY, INC.
COMPLETED	851009
SAMPLED	001206
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	9050
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	2320
OPEN FLOW, MCFD	14569

COMPONENT, MOLE PCT	
METHANE	83.7
ETHANE	8.7
PROPANE	3.7
N-BUTANE	1.1
ISOBUTANE	0.5
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	–
HEXANES PLUS	0.6
NITROGEN	0.8
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.03
HEATING VALUE*	1,198
SPECIFIC GRAVITY	0.691

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20493
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	ROUND TANK
WELL NAME	J.W. STATE NO. 2
API	3000560105
LOCATION	SEC. 30, T15S, R29E
OWNER	ELK OIL CO.
COMPLETED	700210
SAMPLED	001205
FORMATION	PERM-QUEEN
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	1482
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	26.1
ETHANE	10.9
PROPANE	8.0
N-BUTANE	2.5
ISOBUTANE	1.2
N-PENTANE	0.6
ISOPENTANE	0.6
CYCLOPENTANE	--
HEXANES PLUS	0.6
NITROGEN	49.4
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.07
HEATING VALUE*	856
SPECIFIC GRAVITY	0.986

SAMPLE	20570
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	HAYSTACK
WELL NAME	WEST HAYSTACK FEDERAL NO. 1
API	3000560290
LOCATION	SEC. 19, T6S, R27E
OWNER	READ & STEVENS, INC.
COMPLETED	811117
SAMPLED	001220
FORMATION	PENN-VIRGIL
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	5704
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1792
OPEN FLOW, MCFD	611

COMPONENT, MOLE PCT	
METHANE	86.7
ETHANE	5.0
PROPANE	2.2
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	4.4
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.34
HEATING VALUE*	1,067
SPECIFIC GRAVITY	0.64

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20571
STATE	NEW MEXICO
COUNTY	CHAVES
FIELD	HAYSTACK
WELL NAME	FEDERAL I NO. 1
API	3000560135
LOCATION	SEC. 21, T6S, R27E
OWNER	READ & STEVENS, INC.
COMPLETED	700921
SAMPLED	001220
FORMATION	PENN-VIRGIL
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	5977
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	5714

COMPONENT, MOLE PCT	
METHANE	85.9
ETHANE	5.3
PROPANE	2.2
N-BUTANE	0.8
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	4.3
OXYGEN	0.0
ARGON	0.1
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.35
HEATING VALUE*	1,084
SPECIFIC GRAVITY	0.652

SAMPLE	20697
STATE	NEW MEXICO
COUNTY	EDDY
FIELD	NOT GIVEN
WELL NAME	LITTLEFIELD EM FEDERAL NO. 1
API	3001521996
LOCATION	SEC. 20, T18S, R31E
OWNER	OCEAN ENERGY, INC.
COMPLETED	770328
SAMPLED	010619
FORMATION	PENN-ATOKA, MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	11102
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	3103
OPEN FLOW, MCFD	8173

COMPONENT, MOLE PCT	
METHANE	82.4
ETHANE	9.0
PROPANE	3.8
N-BUTANE	1.1
ISOBUTANE	0.5
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.6
NITROGEN	1.8
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.04
HEATING VALUE*	1,196
SPECIFIC GRAVITY	0.693

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20695
STATE	NEW MEXICO
COUNTY	EDDY
FIELD	POWER
WELL NAME	SHINNERY FEDERAL NO. 1
API	3001529976
LOCATION	SEC. 5, T18S, R31E
OWNER	ROBERT H. FORREST, JR. OIL LLC
COMPLETED	980201
SAMPLED	010619
FORMATION	PERM-GRAYBURG
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3442
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	59.8
ETHANE	14.4
PROPANE	10.1
N-BUTANE	3.2
ISOBUTANE	1.3
N-PENTANE	0.9
ISOPENTANE	1.0
CYCLOPENTANE	--
HEXANES PLUS	1.1
NITROGEN	7.9
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.2
HELIUM	0.14
HEATING VALUE*	1,388
SPECIFIC GRAVITY	0.683

SAMPLE	20694
STATE	NEW MEXICO
COUNTY	EDDY
FIELD	GRAYBURG JACKSON
WELL NAME	SKELLY UNIT NO. 274
API	3001529210
LOCATION	SEC. 28, T17S, R31E
OWNER	WISER OIL CO.
COMPLETED	970110
SAMPLED	010619
FORMATION	PERM-GRAYBURG
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3541
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	40

COMPONENT, MOLE PCT	
METHANE	38.8
ETHANE	17.4
PROPANE	15.6
N-BUTANE	5.0
ISOBUTANE	2.2
N-PENTANE	2.2
ISOPENTANE	1.9
CYCLOPENTANE	--
HEXANES PLUS	2.4
NITROGEN	12.7
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.4
HELIUM	0.22
HEATING VALUE*	1,612
SPECIFIC GRAVITY	1.098

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20509
STATE	NEW MEXICO
COUNTY	EDDY
FIELD	LOGAN DRAW
WELL NAME	OXY HARVESTER FEDERAL NO. 1
API	3001530882
LOCATION	SEC. 26, T17S, R27E
OWNER	OXY USA WTP LIMITED PARTNERSHIP
COMPLETED	000519
SAMPLED	001206
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	9640
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	1738

COMPONENT, MOLE PCT	
METHANE	83.2
ETHANE	7.7
PROPANE	4.5
N-BUTANE	1.9
ISOBUTANE	0.9
N-PENTANE	0.4
ISOPENTANE	0.5
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	0.4
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.02
HEATING VALUE*	1,225
SPECIFIC GRAVITY	0.706

SAMPLE	20508
STATE	NEW MEXICO
COUNTY	EDDY
FIELD	LOGAN DRAW
WELL NAME	OXY SKINNY SALOON FEDERAL NO. 1
API	3001530756
LOCATION	SEC. 11, T17S, R27E
OWNER	OXY USA WTP LIMITED PARTNERSHIP
COMPLETED	991129
SAMPLED	001206
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	9394
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	880
OPEN FLOW, MCFD	532

COMPONENT, MOLE PCT	
METHANE	86.9
ETHANE	7.2
PROPANE	2.9
N-BUTANE	0.8
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.02
HEATING VALUE*	1,157
SPECIFIC GRAVITY	0.662

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20455
STATE	NEW MEXICO
COUNTY	EDDY
FIELD	HAPPY VALLEY
WELL NAME	LANCASTER SPRING COM NO. 3
API	3001530965
LOCATION	SEC. 8, T22S, R26E
OWNER	RICKS EXPLORATION ACQUISITION CORP.
COMPLETED	001101
SAMPLED	001127
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	11486
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	91

COMPONENT, MOLE PCT	
METHANE	91.9
ETHANE	4.0
PROPANE	0.8
N-BUTANE	0.1
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.5
HELIUM	0.03
HEATING VALUE*	1,038
SPECIFIC GRAVITY	0.616

SAMPLE	20456
STATE	NEW MEXICO
COUNTY	EDDY
FIELD	EDDY UNDESIGNATED
WELL NAME	FEDERAL AA NO. 1
API	3001522926
LOCATION	SEC. 17, T22S, R26E
OWNER	RICKS EXPLORATION ACQUISITION CORP.
COMPLETED	791009
SAMPLED	001127
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	11290
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	1300

COMPONENT, MOLE PCT	
METHANE	95.3
ETHANE	2.5
PROPANE	0.4
N-BUTANE	0.1
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.7
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.8
HELIUM	0.03
HEATING VALUE*	1,031
SPECIFIC GRAVITY	0.587

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20457
STATE	NEW MEXICO
COUNTY	EDDY
FIELD	HAPPY VALLEY
WELL NAME	FEDERAL BN NO. 1
API	3001523498
LOCATION	SEC. 17, T22S, R26E
OWNER	RICKS EXPLORATION ACQUISITION CORP.
COMPLETED	810113
SAMPLED	001127
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	11668
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1778
OPEN FLOW, MCFD	6500

COMPONENT, MOLE PCT	
METHANE	94.9
ETHANE	2.7
PROPANE	0.5
N-BUTANE	0.1
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.6
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.03
HEATING VALUE*	1,034
SPECIFIC GRAVITY	0.59

SAMPLE	20459
STATE	NEW MEXICO
COUNTY	EDDY
FIELD	HAPPY VALLEY
WELL NAME	LANCASTER SPRING COM NO. 1
API	3001523437
LOCATION	SEC. 8, T22S, R26E
OWNER	RICKS EXPLORATION ACQUISITION CORP.
COMPLETED	801028
SAMPLED	001127
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	11330
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	13000

COMPONENT, MOLE PCT	
METHANE	95.8
ETHANE	2.1
PROPANE	0.3
N-BUTANE	0.1
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.8
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.03
HEATING VALUE*	1,026
SPECIFIC GRAVITY	0.583

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20507	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.8
COUNTY	EDDY	ETHANE	7.1
FIELD	CROW FLATS	PROPANE	2.9
WELL NAME	FED. CX GAS COM NO. 1	N-BUTANE	0.8
API	3001524025	ISOBUTANE	0.4
LOCATION	SEC. 12, T17S, R27E	N-PENTANE	0.3
OWNER	RICKS EXPLORATION ACQUISITION CORP.	ISOPENTANE	0.3
COMPLETED	820222	CYCLOPENTANE	--
SAMPLED	001206	HEXANES PLUS	0.6
FORMATION	PENN-MORROW	NITROGEN	0.5
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	9400	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1410	CARBON DIOXIDE	0.4
		HELIUM	0.03
		HEATING VALUE*	1,167
		SPECIFIC GRAVITY	0.667

SAMPLE	20458	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	91.9
COUNTY	EDDY	ETHANE	4.1
FIELD	HAPPY VALLEY	PROPANE	1.2
WELL NAME	STATE IM COM NO. 1	N-BUTANE	0.4
API	3001523461	ISOBUTANE	0.3
LOCATION	SEC. 16, T22S, R26E	N-PENTANE	0.1
OWNER	RICKS EXPLORATION ACQUISITION CORP.	ISOPENTANE	0.2
COMPLETED	810622	CYCLOPENTANE	--
SAMPLED	001127	HEXANES PLUS	0.3
FORMATION	PENN-MORROW	NITROGEN	1.0
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	11542	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	3598	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1492	CARBON DIOXIDE	0.4
		HELIUM	0.03
		HEATING VALUE*	1,085
		SPECIFIC GRAVITY	0.619

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20460	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	81.3
COUNTY	EDDY	ETHANE	11.2
FIELD	CARLSBAD E	PROPANE	3.7
WELL NAME	E.G. GARNER COM NO. 1	N-BUTANE	1.2
API	3001522722	ISOBUTANE	0.6
LOCATION	SEC. 26, T21S, R27E	N-PENTANE	0.4
OWNER	DELTA PETROLEUM CORP.	ISOPENTANE	0.3
COMPLETED	790220	CYCLOPENTANE	–
SAMPLED	001127	HEXANES PLUS	0.4
FORMATION	PENN-MORROW	NITROGEN	0.8
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	11616	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1095	CARBON DIOXIDE	0.1
		HELIUM	0.05
		HEATING VALUE*	1,219
		SPECIFIC GRAVITY	0.701

SAMPLE	20485	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	78.6
COUNTY	LEA	ETHANE	10.3
FIELD	DRINKARD	PROPANE	4.6
WELL NAME	LOCKHART A27 NO. 5	N-BUTANE	1.4
API	3002506803	ISOBUTANE	0.5
LOCATION	SEC. 27, T21S, R37E	N-PENTANE	0.4
OWNER	CONOCO, INC.	ISOPENTANE	0.3
COMPLETED	971027	CYCLOPENTANE	--
SAMPLED	001129	HEXANES PLUS	0.6
FORMATION	PERM-BLINEBRY	NITROGEN	2.5
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	6387	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	97	CARBON DIOXIDE	0.6
		HELIUM	0.04
		HEATING VALUE*	1,217
		SPECIFIC GRAVITY	0.726

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20484
STATE	NEW MEXICO
COUNTY	LEA
FIELD	BLINEBRY
WELL NAME	LOCKHART B35 NO. 1
API	3002507029
LOCATION	SEC. 35, T21S, R37E
OWNER	CONOCO, INC.
COMPLETED	980323
SAMPLED	001129
FORMATION	PERM-BLINEBRY
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	6226
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	493

COMPONENT, MOLE PCT	
METHANE	77.3
ETHANE	10.9
PROPANE	5.3
N-BUTANE	1.8
ISOBUTANE	0.6
N-PENTANE	0.6
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.8
NITROGEN	2.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.04
HEATING VALUE*	1,269
SPECIFIC GRAVITY	0.747

SAMPLE	20684
STATE	NEW MEXICO
COUNTY	LEA
FIELD	YOUNG N
WELL NAME	R.E. GRAHAM 7 NO. 1
API	3002529002
LOCATION	SEC. 7, T18S, R32E
OWNER	CIMAREX ENERGY CO.
COMPLETED	850415
SAMPLED	010618
FORMATION	PERM-BONE SPRING
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	8546
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	1

COMPONENT, MOLE PCT	
METHANE	70.4
ETHANE	11.5
PROPANE	6.3
N-BUTANE	2.5
ISOBUTANE	0.9
N-PENTANE	0.9
ISOPENTANE	0.9
CYCLOPENTANE	--
HEXANES PLUS	1.6
NITROGEN	4.7
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.07
HEATING VALUE*	1,342
SPECIFIC GRAVITY	0.817

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20465
STATE	NEW MEXICO
COUNTY	LEA
FIELD	AIRSTRIP
WELL NAME	TEAPOT NO. 1 UNIT J
API	3002525955
LOCATION	SEC. 34, T18S, R34E
OWNER	AMTEX ENERGY, INC.
COMPLETED	880421
SAMPLED	001127
FORMATION	PERM-BONE SPRING
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	9975
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	32

COMPONENT, MOLE PCT	
METHANE	65.7
ETHANE	12.1
PROPANE	7.3
N-BUTANE	2.7
ISOBUTANE	1.0
N-PENTANE	0.8
ISOPENTANE	0.8
CYCLOPENTANE	--
HEXANES PLUS	1.2
NITROGEN	4.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	3.8
HELIUM	0.08
HEATING VALUE*	1,305
SPECIFIC GRAVITY	0.859

SAMPLE	20679
STATE	NEW MEXICO
COUNTY	LEA
FIELD	YOUNG N
WELL NAME	YOUNG 8709 JV-P NO. 1
API	3002530051
LOCATION	SEC. 11, T18S, R32E
OWNER	BTA OIL PRODUCERS
COMPLETED	871119
SAMPLED	010618
FORMATION	PERM-BONE SPRING
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	8435
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	249

COMPONENT, MOLE PCT	
METHANE	67.2
ETHANE	13.8
PROPANE	7.8
N-BUTANE	2.7
ISOBUTANE	1.0
N-PENTANE	0.7
ISOPENTANE	0.7
CYCLOPENTANE	--
HEXANES PLUS	1.2
NITROGEN	2.9
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.9
HELIUM	0.10
HEATING VALUE*	1,356
SPECIFIC GRAVITY	0.837

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20700
STATE	NEW MEXICO
COUNTY	LEA
FIELD	LEA NE
WELL NAME	PEARL 33 FEDERAL NO. 1
API	3002534119
LOCATION	SEC. 33, T19S, R34E
OWNER	READ & STEVENS, INC.
COMPLETED	980929
SAMPLED	010619
FORMATION	PERM-DELAWARE
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	5640
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	124

COMPONENT, MOLE PCT	
METHANE	55.7
ETHANE	9.5
PROPANE	10.3
N-BUTANE	3.6
ISOBUTANE	1.8
N-PENTANE	0.9
ISOPENTANE	1.3
CYCLOPENTANE	--
HEXANES PLUS	1.3
NITROGEN	15.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.16
HEATING VALUE*	1,320
SPECIFIC GRAVITY	0.916

SAMPLE	20486
STATE	NEW MEXICO
COUNTY	LEA
FIELD	DRINKARD
WELL NAME	CENTRAL DRINKARD UNIT 111
API	3002506845
LOCATION	SEC. 28, T21S, R37E
OWNER	CHEVRON U.S.A., INC.
COMPLETED	540423
SAMPLED	001130
FORMATION	PERM-DRINKARD
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	6379
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	2980

COMPONENT, MOLE PCT	
METHANE	76.7
ETHANE	10.6
PROPANE	5.5
N-BUTANE	2.0
ISOBUTANE	0.6
N-PENTANE	0.7
ISOPENTANE	0.5
CYCLOPENTANE	--
HEXANES PLUS	1.0
NITROGEN	2.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.2
HELIUM	0.04
HEATING VALUE*	1,282
SPECIFIC GRAVITY	0.758

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20488
STATE	NEW MEXICO
COUNTY	LEA
FIELD	EUMONT
WELL NAME	GILLILLY FEDERAL GAS COM NO. 4
API	3002504309
LOCATION	SEC. 24, T20S, R36E
OWNER	OCCIDENTAL PERMIAN LTD
COMPLETED	531128
SAMPLED	001130
FORMATION	PERM-GRAYBURG
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3470
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	8800

COMPONENT, MOLE PCT	
METHANE	73.5
ETHANE	8.0
PROPANE	4.8
N-BUTANE	1.7
ISOBUTANE	0.8
N-PENTANE	0.4
ISOPENTANE	0.6
CYCLOPENTANE	--
HEXANES PLUS	0.6
NITROGEN	3.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.1
HYDROGEN SULFIDE**	1.3
CARBON DIOXIDE	4.6
HELIUM	0.02
HEATING VALUE*	1,167
SPECIFIC GRAVITY	0.782

SAMPLE	20693
STATE	NEW MEXICO
COUNTY	LEA
FIELD	MALJAMAR
WELL NAME	BROWN FEDERAL NO. 1
API	3002530199
LOCATION	SEC. 31, T17S, R32E
OWNER	MACK ENERGY CORP.
COMPLETED	880225
SAMPLED	010619
FORMATION	PERM-GRAYBURG
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3820
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	55

COMPONENT, MOLE PCT	
METHANE	58.2
ETHANE	15.5
PROPANE	9.8
N-BUTANE	3.3
ISOBUTANE	1.1
N-PENTANE	1.4
ISOPENTANE	1.2
CYCLOPENTANE	--
HEXANES PLUS	1.7
NITROGEN	6.8
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.5
CARBON DIOXIDE	0.4
HELIUM	0.13
HEATING VALUE*	1,444
SPECIFIC GRAVITY	0.915

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20471
STATE	NEW MEXICO
COUNTY	LEA
FIELD	BUFFALO
WELL NAME	NELLIS C FEDERAL GAS COM NO. 1
API	3002526799
LOCATION	SEC. 8, T19S, R33E
OWNER	PENROC OIL CO.
COMPLETED	830711
SAMPLED	001128
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	13620
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	463

COMPONENT, MOLE PCT	
METHANE	90.4
ETHANE	4.8
PROPANE	1.8
N-BUTANE	0.6
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.4
NITROGEN	0.8
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.01
HEATING VALUE*	1,106
SPECIFIC GRAVITY	0.635

SAMPLE	20470
STATE	NEW MEXICO
COUNTY	LEA
FIELD	BUFFALO
WELL NAME	KUDU 9 FEDERAL COM 1
API	3002534707
LOCATION	SEC. 9, T19S, R33E
OWNER	NEARBURG PRODUCING CO.
COMPLETED	000612
SAMPLED	001128
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	13373
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	87.8
ETHANE	5.7
PROPANE	2.5
N-BUTANE	0.8
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.3
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.5
HELIUM	0.02
HEATING VALUE*	1,125
SPECIFIC GRAVITY	0.658

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20468
STATE	NEW MEXICO
COUNTY	LEA
FIELD	GEM E
WELL NAME	LAGUNA DEEP FEDERAL UNIT NO. 2
API	3002526440
LOCATION	SEC. 26, T19S, R33E
OWNER	MATADOR OPERATING CO.
COMPLETED	830705
SAMPLED	001128
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	13390
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	344

COMPONENT, MOLE PCT	
METHANE	87.2
ETHANE	6.2
PROPANE	2.6
N-BUTANE	0.8
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.6
NITROGEN	0.9
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.02
HEATING VALUE*	1,146
SPECIFIC GRAVITY	0.663

SAMPLE	20012
STATE	NEW MEXICO
COUNTY	LEA
FIELD	TOWNSEND
WELL NAME	BUFFALO ARU STATE COM NO. 1
API	3002502801
LOCATION	SEC. 18, T16S, R35E
OWNER	YATES PETROLEUM CORP.
COMPLETED	971222
SAMPLED	980728
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	12950
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1650
OPEN FLOW, MCFD	1630

COMPONENT, MOLE PCT	
METHANE	84.6
ETHANE	7.9
PROPANE	3.5
N-BUTANE	1.0
ISOBUTANE	0.5
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.7
OXYGEN	0.0
ARGON	0.1
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.06
HEATING VALUE*	1,180
SPECIFIC GRAVITY	0.68

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20489	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	75.3
COUNTY	LEA	ETHANE	6.6
FIELD	EUMONT	PROPANE	4.7
WELL NAME	EUMONT 21 FEDERAL NO. 1	N-BUTANE	1.9
API	3002533170	ISOBUTANE	0.9
LOCATION	SEC. 21, T20S, R37E	N-PENTANE	0.5
OWNER	MEWBOURNE OIL CO.	ISOPENTANE	0.6
COMPLETED	951203	CYCLOPENTANE	--
SAMPLED	001130	HEXANES PLUS	0.8
FORMATION	PERM-QUEEN	NITROGEN	1.1
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3550	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	1.7
OPEN FLOW, MCFD	250	CARBON DIOXIDE	5.9
		HELIUM	0.01
		HEATING VALUE*	1,182
		SPECIFIC GRAVITY	0.79

SAMPLE	20491	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	76.6
COUNTY	LEA	ETHANE	7.1
FIELD	EUMONT	PROPANE	4.4
WELL NAME	GILLULLY B FEDERAL RA A NO. 7	N-BUTANE	1.5
API	3002506236	ISOBUTANE	0.7
LOCATION	SEC. 22, T20S, R37E	N-PENTANE	0.3
OWNER	OCCIDENTAL PERMIAN LTD	ISOPENTANE	0.4
COMPLETED	560329	CYCLOPENTANE	--
SAMPLED	001130	HEXANES PLUS	0.5
FORMATION	PERM-QUEEN	NITROGEN	1.0
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3658	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	1.1
OPEN FLOW, MCFD	2718	CARBON DIOXIDE	6.4
		HELIUM	0.01
		HEATING VALUE*	1,144
		SPECIFIC GRAVITY	0.765

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20487
STATE	NEW MEXICO
COUNTY	LEA
FIELD	EUMONT
WELL NAME	GILLULLY FEDERAL GAS COM NO. 15
API	3002525866
LOCATION	SEC. 24, T20S, R36E
OWNER	OCCIDENTAL PERMIAN LTD
COMPLETED	780531
SAMPLED	001130
FORMATION	PERM-QUEEN
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3610
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	296

COMPONENT, MOLE PCT	
METHANE	77.0
ETHANE	8.0
PROPANE	4.3
N-BUTANE	1.3
ISOBUTANE	0.6
N-PENTANE	0.3
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	1.8
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.3
HYDROGEN SULFIDE**	0.4
CARBON DIOXIDE	5.2
HELIUM	0.01
HEATING VALUE*	1,141
SPECIFIC GRAVITY	0.748

SAMPLE	20490
STATE	NEW MEXICO
COUNTY	LEA
FIELD	EUMONT
WELL NAME	GILLULLY B FEDERAL RA A NO. 4
API	3002506234
LOCATION	SEC. 22, T20S, R37E
OWNER	OCCIDENTAL PERMIAN LTD
COMPLETED	540317
SAMPLED	001130
FORMATION	PERM-SEVEN RIVERS
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3550
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	74.8
ETHANE	9.6
PROPANE	4.5
N-BUTANE	1.2
ISOBUTANE	0.6
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	5.6
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.9
HELIUM	0.04
HEATING VALUE*	1,134
SPECIFIC GRAVITY	0.742

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20473
STATE	NEW MEXICO
COUNTY	LEA
FIELD	JALMAT
WELL NAME	STATE H NO. 5
API	3002534529
LOCATION	SEC. 17, T22S, R36E
OWNER	DOYLE HARTMAN
COMPLETED	981231
SAMPLED	001128
FORMATION	PERM-SEVEN RIVERS
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3607
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	394

COMPONENT, MOLE PCT	
METHANE	66.1
ETHANE	10.8
PROPANE	8.0
N-BUTANE	3.1
ISOBUTANE	1.3
N-PENTANE	1.0
ISOPENTANE	1.0
CYCLOPENTANE	--
HEXANES PLUS	1.4
NITROGEN	1.0
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.7
CARBON DIOXIDE	5.5
HELIUM	0.10
HEATING VALUE*	1,355
SPECIFIC GRAVITY	0.888

SAMPLE	20043
STATE	NEW MEXICO
COUNTY	LEA
FIELD	JOHNSON RANCH
WELL NAME	TRISTE DRAW 34 STATE NO. 1
API	3002534502
LOCATION	SEC. 34, T24S, R33E
OWNER	EOG RESOURCES
COMPLETED	980930
SAMPLED	991209
FORMATION	PERM-WOLFCAMP
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	13636
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1350
OPEN FLOW, MCFD	4200

COMPONENT, MOLE PCT	
METHANE	83.2
ETHANE	9.6
PROPANE	3.7
N-BUTANE	1.3
ISOBUTANE	0.5
N-PENTANE	0.2
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.5
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.2
HELIUM	0.00
HEATING VALUE*	1,213
SPECIFIC GRAVITY	0.689

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20469
STATE	NEW MEXICO
COUNTY	LEA
FIELD	GEM N
WELL NAME	SUN BRIGHT FEDERAL NO. 1
API	3002529140
LOCATION	SEC. 21, T19S, R33E
OWNER	E G L RESOURCES, INC.
COMPLETED	000331
SAMPLED	001128
FORMATION	PERM-WOLFCAMP
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	11108
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	15

COMPONENT, MOLE PCT	
METHANE	81.4
ETHANE	7.1
PROPANE	4.0
N-BUTANE	1.7
ISOBUTANE	0.8
N-PENTANE	1.0
ISOPENTANE	1.0
CYCLOPENTANE	–
HEXANES PLUS	1.8
NITROGEN	0.6
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.06
HEATING VALUE*	1,294
SPECIFIC GRAVITY	0.756

SAMPLE	20476
STATE	NEW MEXICO
COUNTY	LEA
FIELD	RHODES
WELL NAME	H.G. MOBERLY C FEDERAL NO. 1
API	3002511993
LOCATION	SEC. 17, T26S, R37E
OWNER	LANEXCO, INC.
COMPLETED	290311
SAMPLED	001129
FORMATION	PERM-YATES
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3075
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	74.2
ETHANE	10.7
PROPANE	5.9
N-BUTANE	2.2
ISOBUTANE	0.9
N-PENTANE	0.8
ISOPENTANE	1.0
CYCLOPENTANE	--
HEXANES PLUS	1.9
NITROGEN	1.8
OXYGEN	0.0
ARGON	0.2
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.3
HELIUM	0.07
HEATING VALUE*	1,354
SPECIFIC GRAVITY	0.806

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20482	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	71.0
COUNTY	LEA	ETHANE	10.7
FIELD	JALMAT	PROPANE	7.4
WELL NAME	MYERS B FED. NO. 33	N-BUTANE	3.1
API	3002525973	ISOBUTANE	1.3
LOCATION	SEC. 7, T24S, R37E	N-PENTANE	1.0
OWNER	DOYLE HARTMAN	ISOPENTANE	1.1
COMPLETED	780726	CYCLOPENTANE	--
SAMPLED	001129	HEXANES PLUS	1.5
FORMATION	PERM-YATES	NITROGEN	1.3
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3207	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	580	CARBON DIOXIDE	1.7
		HELIUM	0.11
		HEATING VALUE*	1,389
		SPECIFIC GRAVITY	0.844

SAMPLE	20480	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	70.0
COUNTY	LEA	ETHANE	11.3
FIELD	JALMAT	PROPANE	7.6
WELL NAME	LANGLIE C FEDERAL NO. 1	N-BUTANE	3.0
API	3002525898	ISOBUTANE	1.3
LOCATION	SEC. 9, T25S, R37E	N-PENTANE	0.8
OWNER	OCCIDENTAL PERMIAN LTD	ISOPENTANE	1.1
COMPLETED	790706	CYCLOPENTANE	--
SAMPLED	001129	HEXANES PLUS	1.2
FORMATION	PERM-YATES & SEVEN RIVERS	NITROGEN	1.0
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3130	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.5
OPEN FLOW, MCFD	279	CARBON DIOXIDE	2.2
		HELIUM	0.00
		HEATING VALUE*	1,377
		SPECIFIC GRAVITY	0.845

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20474
STATE	NEW MEXICO
COUNTY	LEA
FIELD	EUMONT
WELL NAME	ELLIOTT B NO. 6
API	3002510333
LOCATION	SEC. 17, T22S, R37E
OWNER	ZIA ENERGY, INC.
COMPLETED	380805
SAMPLED	001128
FORMATION	PERM-YATES,SVN RVRS,QUEEN
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	3480
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	58

COMPONENT, MOLE PCT	
METHANE	75.2
ETHANE	11.9
PROPANE	5.7
N-BUTANE	1.8
ISOBUTANE	0.7
N-PENTANE	0.5
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.7
NITROGEN	2.3
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.05
HEATING VALUE*	1,264
SPECIFIC GRAVITY	0.759

SAMPLE	20657
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BASIN
WELL NAME	SAN JUAN 28-6 UNIT NO. 99
API	3003908141
LOCATION	SEC. 24, T28N, R6W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	651014
SAMPLED	010412
FORMATION	CRET-DAKOTA
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	7749
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	2678
OPEN FLOW, MCFD	4048

COMPONENT, MOLE PCT	
METHANE	79.8
ETHANE	10.7
PROPANE	4.8
N-BUTANE	1.3
ISOBUTANE	0.9
N-PENTANE	0.3
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.08
HEATING VALUE*	1,237
SPECIFIC GRAVITY	0.718

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20659
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BASIN
WELL NAME	SAN JUAN 28-5 UNIT NO. 58M
API	3003925597
LOCATION	SEC. 30, T28N, R5W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	970122
SAMPLED	010412
FORMATION	CRET-DAKOTA, MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	7792
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	510
OPEN FLOW, MCFD	2205

COMPONENT, MOLE PCT	
METHANE	84.2
ETHANE	8.7
PROPANE	3.1
N-BUTANE	1.0
ISOBUTANE	0.7
N-PENTANE	0.2
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.1
HELIUM	0.06
HEATING VALUE*	1,182
SPECIFIC GRAVITY	0.682

SAMPLE	20663
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BASIN
WELL NAME	SAN JUAN 29-5 UNIT NO. 226
API	3003925076
LOCATION	SEC. 7, T29N, R5W
OWNER	PHILLIPS PETROLEUM CO., NW
COMPLETED	921001
SAMPLED	010412
FORMATION	CRET-FRUITLAND
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	3330
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1200
OPEN FLOW, MCFD	328

COMPONENT, MOLE PCT	
METHANE	83.0
ETHANE	0.3
PROPANE	0.0
N-BUTANE	TRACE
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	0.0
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	16.6
HELIUM	TRACE
HEATING VALUE*	847
SPECIFIC GRAVITY	0.717

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20664
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BASIN
WELL NAME	SAN JUAN 30-6 UNIT NO. 459
API	3003924289
LOCATION	SEC. 20, T30N, R6W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	881007
SAMPLED	010412
FORMATION	CRET-FRUITLAND
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	3157
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	356
OPEN FLOW, MCFD	103

COMPONENT, MOLE PCT	
METHANE	76.3
ETHANE	0.3
PROPANE	0.0
N-BUTANE	0.0
ISOBUTANE	0.0
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	–
HEXANES PLUS	0.0
NITROGEN	0.0
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	23.4
HELIUM	TRACE
HEATING VALUE*	777
SPECIFIC GRAVITY	0.782

SAMPLE	20662
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BASIN
WELL NAME	SAN JUAN 29-5 UNIT NO. 32M
API	3003925817
LOCATION	SEC. 29 T29N R5W
OWNER	PHILLIPS PETROLEUM CO., NW
COMPLETED	991019
SAMPLED	010412
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5905
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	313

COMPONENT, MOLE PCT	
METHANE	88.8
ETHANE	5.8
PROPANE	1.9
N-BUTANE	0.5
ISOBUTANE	0.4
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.3
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.6
HELIUM	0.04
HEATING VALUE*	1,110
SPECIFIC GRAVITY	0.644

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20660
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BLANCO
WELL NAME	SAN JUAN 28-5 UNIT NO. 14A
API	3003922205
LOCATION	SEC. 20, T28N, R5W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	000530
SAMPLED	010412
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5000
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	82.4
ETHANE	9.8
PROPANE	3.9
N-BUTANE	1.0
ISOBUTANE	0.6
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.06
HEATING VALUE*	1,199
SPECIFIC GRAVITY	0.693

SAMPLE	20656
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BLANCO
WELL NAME	SAN JUAN 28-6 UNIT NO. 5A
API	3003921869
LOCATION	SEC. 14, T28N, R6W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	790728
SAMPLED	010412
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5875
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	663
OPEN FLOW, MCFD	1841

COMPONENT, MOLE PCT	
METHANE	81.6
ETHANE	10.3
PROPANE	4.1
N-BUTANE	1.0
ISOBUTANE	0.7
N-PENTANE	0.2
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.07
HEATING VALUE*	1,207
SPECIFIC GRAVITY	0.698

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20658
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BLANCO
WELL NAME	SAN JUAN 28-6 UNIT NO. 65
API	3003907375
LOCATION	SEC. 24, T28N, R6W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	561108
SAMPLED	010412
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5730
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1032
OPEN FLOW, MCFD	3897

COMPONENT, MOLE PCT	
METHANE	81.4
ETHANE	10.2
PROPANE	4.0
N-BUTANE	1.1
ISOBUTANE	0.7
N-PENTANE	0.3
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.07
HEATING VALUE*	1,214
SPECIFIC GRAVITY	0.703

SAMPLE	20872
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BLANCO
WELL NAME	JICARILLA 96 NO. 6C
API	3003926549
LOCATION	SEC. 2, T26N, R3W
OWNER	ENERGEN RESOURCES CORP.
COMPLETED	010417
SAMPLED	011003
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5477
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1190
OPEN FLOW, MCFD	636

COMPONENT, MOLE PCT	
METHANE	81.6
ETHANE	10.1
PROPANE	4.2
N-BUTANE	1.1
ISOBUTANE	0.6
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.07
HEATING VALUE*	1,213
SPECIFIC GRAVITY	0.699

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20661
STATE	NEW MEXICO
COUNTY	RIO ARRIBA
FIELD	BASIN
WELL NAME	SAN JUAN 28-5 UNIT NO. 33
API	3003907413
LOCATION	SEC. 17, T28N, R5W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	590624
SAMPLED	010412
FORMATION	CRET-MESAVERDE, DAKOTA
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	8041
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	2699
OPEN FLOW, MCFD	5518

COMPONENT, MOLE PCT	
METHANE	82.8
ETHANE	9.6
PROPANE	3.7
N-BUTANE	1.0
ISOBUTANE	0.6
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.06
HEATING VALUE*	1,194
SPECIFIC GRAVITY	0.689

SAMPLE	20580
STATE	NEW MEXICO
COUNTY	ROOSEVELT
FIELD	ALLISON
WELL NAME	EL ZORRO NO. 1
API	3004120797
LOCATION	SEC. 25, T8S, R36E
OWNER	LAYTON ENTERPRISES, INC.
COMPLETED	860201
SAMPLED	001221
FORMATION	PENN-CISCO
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	9614
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	102

COMPONENT, MOLE PCT	
METHANE	63.0
ETHANE	11.1
PROPANE	7.7
N-BUTANE	2.7
ISOBUTANE	1.1
N-PENTANE	0.5
ISOPENTANE	0.5
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	10.6
OXYGEN	1.1
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.1
HELIUM	0.09
HEATING VALUE*	1,217
SPECIFIC GRAVITY	0.835

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20578
STATE	NEW MEXICO
COUNTY	ROOSEVELT
FIELD	BLUITT
WELL NAME	BLUITT SAN ANDRES 18 FEDERAL NO. 14
API	3004120855
LOCATION	SEC. 18, T8S, R38E
OWNER	SAGA PETROLEUM LLC
COMPLETED	900601
SAMPLED	001221
FORMATION	PERM-SAN ANDRES
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4712
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	74.3
ETHANE	7.3
PROPANE	3.0
N-BUTANE	0.8
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	6.8
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.1
CARBON DIOXIDE	6.6
HELIUM	0.07
HEATING VALUE*	1,026
SPECIFIC GRAVITY	0.745

SAMPLE	20574
STATE	NEW MEXICO
COUNTY	ROOSEVELT
FIELD	BLUITT
WELL NAME	FEDERAL BL 1
API	3004110135
LOCATION	SEC. 8, T8S, R3ZE
OWNER	BRECK OPERATING CORP.
COMPLETED	641115
SAMPLED	001221
FORMATION	PERM-SAN ANDRES
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	4445
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	85

COMPONENT, MOLE PCT	
METHANE	74.2
ETHANE	7.0
PROPANE	2.9
N-BUTANE	0.7
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	7.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.2
CARBON DIOXIDE	6.3
HELIUM	0.08
HEATING VALUE*	1,014
SPECIFIC GRAVITY	0.743

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20575
STATE	NEW MEXICO
COUNTY	ROOSEVELT
FIELD	BLUITT
WELL NAME	FEDERAL C NO. 1
API	3004120402
LOCATION	SEC. 4, T8S, R37E
OWNER	H.L. BROWN OPERATING, LLC
COMPLETED	751205
SAMPLED	001221
FORMATION	PERM-WOLFCAMP
GEOLOGIC PROV NCE CODE	430
TRUE VERTICAL DEPTH (FT)	8011
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	7680

COMPONENT, MOLE PCT	
METHANE	75.8
ETHANE	7.7
PROPANE	4.0
N-BUTANE	1.6
ISOBUTANE	0.6
N-PENTANE	0.5
ISOPENTANE	0.4
CYCLOPENTANE	–
HEXANES PLUS	0.6
NITROGEN	8.6
OXYGEN	0.0
ARGON	0.2
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.21
HEATING VALUE*	1,139
SPECIFIC GRAVITY	0.734

SAMPLE	20863
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	PAYNE NO. 5
API	3004511280
LOCATION	SEC. 27, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	600607
SAMPLED	011003
FORMATION	CRET-CLIFF HOUSE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	6262
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	671
OPEN FLOW, MCFD	5212

COMPONENT, MOLE PCT	
METHANE	87.4
ETHANE	6.9
PROPANE	2.2
N-BUTANE	0.6
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.3
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.7
HELIUM	0.02
HEATING VALUE*	1,123
SPECIFIC GRAVITY	0.654

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20858
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	SAN JUAN 32-9 UNIT NO. 38
API	3004511192
LOCATION	SEC. 35, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	560922
SAMPLED	011002
FORMATION	CRET-CLIFF HOUSE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5420
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1050
OPEN FLOW, MCFD	5389

COMPONENT, MOLE PCT	
METHANE	88.3
ETHANE	6.0
PROPANE	1.8
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.2
HELIUM	0.03
HEATING VALUE*	1,099
SPECIFIC GRAVITY	0.647

SAMPLE	20864
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BASIN
WELL NAME	PAYNE NO. 4-A
API	3004523911
LOCATION	SEC. 22, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	800812
SAMPLED	011003
FORMATION	CRET-DAKOTA
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	8353
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	2748
OPEN FLOW, MCFD	3950

COMPONENT, MOLE PCT	
METHANE	95.0
ETHANE	0.3
PROPANE	TRACE
N-BUTANE	TRACE
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	4.4
HELIUM	0.02
HEATING VALUE*	968
SPECIFIC GRAVITY	0.6

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20647	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	85.8
COUNTY	SAN JUAN	ETHANE	7.6
FIELD	UTE DOME	PROPANE	3.0
WELL NAME	UTE INDIANS A NO. 18	N-BUTANE	0.9
API	3004524609	ISOBUTANE	0.5
LOCATION	SEC. 35, T32N, R14W	N-PENTANE	0.3
OWNER	XTO ENERGY, INC.	ISOPENTANE	0.3
COMPLETED	810326	CYCLOPENTANE	--
SAMPLED	010411	HEXANES PLUS	0.4
FORMATION	CRET-DAKOTA	NITROGEN	0.7
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2268	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	576	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1539	CARBON DIOXIDE	0.5
		HELIUM	0.10
		HEATING VALUE*	1,164
		SPECIFIC GRAVITY	0.667

SAMPLE	20632	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	80.7
COUNTY	SAN JUAN	ETHANE	11.9
FIELD	BASIN	PROPANE	3.9
WELL NAME	FARFELU 1	N-BUTANE	0.8
API	3004529426	ISOBUTANE	0.5
LOCATION	SEC. 19, T25N, R11W	N-PENTANE	0.2
OWNER	ELM RIDGE RESOURCES	ISOPENTANE	0.2
COMPLETED	970414	CYCLOPENTANE	--
SAMPLED	010410	HEXANES PLUS	0.4
FORMATION	CRET-DAKOTA	NITROGEN	0.9
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	5784	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	113	CARBON DIOXIDE	0.4
		HELIUM	0.10
		HEATING VALUE*	1,202
		SPECIFIC GRAVITY	0.693

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20848
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BASIN
WELL NAME	PAYNE NO. 2-A
API	3004523910
LOCATION	SEC. 21, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	800903
SAMPLED	011002
FORMATION	CRET-DAKOTA, MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	7718
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	645
OPEN FLOW, MCFD	2445

COMPONENT, MOLE PCT	
METHANE	92.2
ETHANE	3.0
PROPANE	0.8
N-BUTANE	0.2
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	3.2
HELIUM	0.01
HEATING VALUE*	1,031
SPECIFIC GRAVITY	0.618

SAMPLE	20655
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BASIN
WELL NAME	HOWELL E NO. 300
API	3004526918
LOCATION	SEC. 14, T30N, R8W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	880910
SAMPLED	010412
FORMATION	CRET-FRUITLAND
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	2719
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	888
OPEN FLOW, MCFD	1896

COMPONENT, MOLE PCT	
METHANE	82.6
ETHANE	0.4
PROPANE	0.0
N-BUTANE	TRACE
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	0.0
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	17.0
HELIUM	TRACE
HEATING VALUE*	844
SPECIFIC GRAVITY	0.72

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20652
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BASIN
WELL NAME	FLORANCE 119 NO. 120
API	3004528727
LOCATION	SEC. 21, T29N, R9W
OWNER	CONOCO, INC.
COMPLETED	930422
SAMPLED	010412
FORMATION	CRET-FRUITLAND
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	1964
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	130

COMPONENT, MOLE PCT	
METHANE	92.3
ETHANE	4.4
PROPANE	1.5
N-BUTANE	0.2
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.9
HELIUM	0.03
HEATING VALUE*	1,075
SPECIFIC GRAVITY	0.611

SAMPLE	20633
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	CEDAR HILL
WELL NAME	F.C. DECKER PRIMO COM 2 UNIT H
API	3004527480
LOCATION	SEC. 19, T32N, R10W
OWNER	CONOCO, INC.
COMPLETED	910411
SAMPLED	010410
FORMATION	CRET-FRUITLAND COAL
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	2848
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	1764

COMPONENT, MOLE PCT	
METHANE	79.4
ETHANE	0.3
PROPANE	0.0
N-BUTANE	TRACE
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	0.0
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	20.2
HELIUM	TRACE
HEATING VALUE*	810
SPECIFIC GRAVITY	0.751

* CALCULATED GROSS BTU PER CU FT, DRY AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20871
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	TOCITO DOME
WELL NAME	NAVAJO TRIBAL "N" NO. 1
API	3004505809
LOCATION	SEC. 17, T26N, R18W.
OWNER	ROBERT L. BAYLESS
COMPLETED	630421
SAMPLED	011003
FORMATION	PENN-HERMOSA
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	6410
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	5077

COMPONENT, MOLE PCT	
METHANE	75.9
ETHANE	9.1
PROPANE	4.0
N-BUTANE	1.4
ISOBUTANE	0.7
N-PENTANE	0.4
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.8
NITROGEN	6.7
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.1
HELIUM	0.50
HEATING VALUE*	1,169
SPECIFIC GRAVITY	0.734

SAMPLE	20648
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BARKER DOME
WELL NAME	UTE MOUNTAIN NO. 40
API	3004529354
LOCATION	SEC. 20, T32N, R14W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	960805
SAMPLED	010411
FORMATION	PENN-ISMAY, PARADOX
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	7430
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1800
OPEN FLOW, MCFD	2595

COMPONENT, MOLE PCT	
METHANE	68.4
ETHANE	3.3
PROPANE	1.1
N-BUTANE	0.4
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	19.0
OXYGEN	3.2
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	3.5
HELIUM	0.35
HEATING VALUE*	824
SPECIFIC GRAVITY	0.73

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20846
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	PAYNE NO. 1-A
API	3004522172
LOCATION	SEC. 20, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	780720
SAMPLED	011002
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5515
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	5769

COMPONENT, MOLE PCT	
METHANE	92.6
ETHANE	3.2
PROPANE	0.6
N-BUTANE	0.2
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.7
HELIUM	0.01
HEATING VALUE*	1,037
SPECIFIC GRAVITY	0.614

SAMPLE	20861
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	SAN JUAN 32-9 UNIT NO. 49A
API	3004529443
LOCATION	SEC. 23, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	970823
SAMPLED	011003
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	6327
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	1643

COMPONENT, MOLE PCT	
METHANE	91.4
ETHANE	4.4
PROPANE	1.1
N-BUTANE	0.3
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.2
HELIUM	0.01
HEATING VALUE*	1,062
SPECIFIC GRAVITY	0.622

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20869
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	SAN JUAN 32-9 UNIT NO. 75
API	3004511427
LOCATION	SEC. 18, T32N, R9W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	600607
SAMPLED	011003
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	6040
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1021
OPEN FLOW, MCFD	2559

COMPONENT, MOLE PCT	
METHANE	95.9
ETHANE	1.3
PROPANE	0.2
N-BUTANE	TRACE
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.3
HELIUM	0.01
HEATING VALUE*	1,004
SPECIFIC GRAVITY	0.587

SAMPLE	20850
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	PAGE 1-A
API	3004522455
LOCATION	SEC. 18, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	770624
SAMPLED	011002
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5514
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	863
OPEN FLOW, MCFD	3322

COMPONENT, MOLE PCT	
METHANE	90.5
ETHANE	4.8
PROPANE	1.4
N-BUTANE	0.4
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.1
HELIUM	0.01
HEATING VALUE*	1,076
SPECIFIC GRAVITY	0.63

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20849
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	VANDERSLICE NO. 2Y
API	3004520996
LOCATION	SEC. 18, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	930821
SAMPLED	011002
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5430
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	875
OPEN FLOW, MCFD	123

COMPONENT, MOLE PCT	
METHANE	90.7
ETHANE	4.8
PROPANE	1.3
N-BUTANE	0.3
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.2
HELIUM	0.02
HEATING VALUE*	1,070
SPECIFIC GRAVITY	0.627

SAMPLE	20844
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	HARRISON NO. 1
API	3004511124
LOCATION	SEC. 31, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	690325
SAMPLED	011002
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5060
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	788
OPEN FLOW, MCFD	3632

COMPONENT, MOLE PCT	
METHANE	95.1
ETHANE	1.6
PROPANE	0.1
N-BUTANE	TRACE
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.9
HELIUM	0.02
HEATING VALUE*	997
SPECIFIC GRAVITY	0.593

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20865
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BASIN
WELL NAME	PAYNE NO. 4-A
API	3004523911
LOCATION	SEC. 22, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	800812
SAMPLED	011003
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	6298
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	754
OPEN FLOW, MCFD	2784

COMPONENT, MOLE PCT	
METHANE	88.8
ETHANE	6.2
PROPANE	1.9
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.7
HELIUM	0.03
HEATING VALUE*	1,102
SPECIFIC GRAVITY	0.641

SAMPLE	20870
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	SAN JUAN 32-9 UNIT NO. 68
API	3004511316
LOCATION	SEC. 24, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	590423
SAMPLED	011003
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	6040
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1020
OPEN FLOW, MCFD	6919

COMPONENT, MOLE PCT	
METHANE	88.3
ETHANE	6.2
PROPANE	2.0
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.0
HELIUM	0.03
HEATING VALUE*	1,105
SPECIFIC GRAVITY	0.647

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20847	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	88.5
COUNTY	SAN JUAN	ETHANE	5.8
FIELD	BLANCO	PROPANE	1.9
WELL NAME	PAYNE NO. 3-E	N-BUTANE	0.5
API	3004527543	ISOBUTANE	0.4
LOCATION	SEC. 20, T32N, R10W	N-PENTANE	0.1
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.2
COMPLETED	971115	CYCLOPENTANE	--
SAMPLED	011002	HEXANES PLUS	0.3
FORMATION	CRET-MESAVERDE	NITROGEN	0.1
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	5701	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	434	CARBON DIOXIDE	2.3
		HELIUM	0.03
		HEATING VALUE*	1,098
		SPECIFIC GRAVITY	0.648

SAMPLE	20845	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	89.7
COUNTY	SAN JUAN	ETHANE	5.0
FIELD	BASIN	PROPANE	1.6
WELL NAME	PAYNE NO. 1-B	N-BUTANE	0.4
API	3004530432	ISOBUTANE	0.3
LOCATION	SEC. 20, T32N, R10W	N-PENTANE	0.1
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.1
COMPLETED	010319	CYCLOPENTANE	--
SAMPLED	011002	HEXANES PLUS	0.2
FORMATION	CRET-MESAVERDE	NITROGEN	0.1
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	5644	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	307	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	2506	CARBON DIOXIDE	2.4
		HELIUM	0.03
		HEATING VALUE*	1,082
		SPECIFIC GRAVITY	0.638

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20653	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	82.8
COUNTY	SAN JUAN	ETHANE	6.6
FIELD	BLANCO	PROPANE	2.3
WELL NAME	HOWELL J NO. 3A	N-BUTANE	0.6
API	3004521987	ISOBUTANE	0.4
LOCATION	SEC. 11, T30N, R8W	N-PENTANE	0.2
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.2
COMPLETED	760505	CYCLOPENTANE	--
SAMPLED	010412	HEXANES PLUS	0.3
FORMATION	CRET-MESAVERDE	NITROGEN	4.8
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	5161	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	3660	CARBON DIOXIDE	1.9
		HELIUM	0.04
		HEATING VALUE*	1,074
		SPECIFIC GRAVITY	0.675

SAMPLE	20654	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.9
COUNTY	SAN JUAN	ETHANE	7.0
FIELD	BLANCO	PROPANE	2.4
WELL NAME	HOWELL E NO. 2R	N-BUTANE	0.6
API	3004527563	ISOBUTANE	0.4
LOCATION	SEC. 14, T30N, R8W	N-PENTANE	0.2
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.2
COMPLETED	900915	CYCLOPENTANE	--
SAMPLED	010412	HEXANES PLUS	0.3
FORMATION	CRET-MESAVERDE	NITROGEN	0.4
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)		ARGON	0.0
MEASURED DEPTH	6664	HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	121	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	12200	CARBON DIOXIDE	1.6
		HELIUM	0.04
		HEATING VALUE*	1,128
		SPECIFIC GRAVITY	0.658

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20866
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	SAN JUAN NO. 28-A
API	3004522916
LOCATION	SEC. 26, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	781017
SAMPLED	011003
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	6357
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	712
OPEN FLOW, MCFD	1587

COMPONENT, MOLE PCT	
METHANE	86.8
ETHANE	7.2
PROPANE	2.2
N-BUTANE	0.5
ISOBUTANE	0.4
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.4
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.9
HELIUM	0.04
HEATING VALUE*	1,126
SPECIFIC GRAVITY	0.659

SAMPLE	20869
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	HOWELL A NO. 3
API	3004509794
LOCATION	SEC. 4, T30N, R8W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	940125
SAMPLED	010412
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5374
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	86.9
ETHANE	7.1
PROPANE	2.5
N-BUTANE	0.7
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.4
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.5
HELIUM	0.04
HEATING VALUE*	1,138
SPECIFIC GRAVITY	0.66

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20852	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	85.8
COUNTY	SAN JUAN	ETHANE	7.8
FIELD	BLANCO	PROPANE	2.7
WELL NAME	VANDERSLICE NO. 1	N-BUTANE	0.7
API	3004511365	ISOBUTANE	0.5
LOCATION	SEC. 19, T32N, R10W	N-PENTANE	0.2
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.2
COMPLETED	700522	CYCLOPENTANE	--
SAMPLED	011002	HEXANES PLUS	0.3
FORMATION	CRET-MESAVERDE	NITROGEN	0.1
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	5240	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	864	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	2542	CARBON DIOXIDE	1.8
		HELIUM	0.05
		HEATING VALUE*	1,140
		SPECIFIC GRAVITY	0.666

SAMPLE	20860	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.2
COUNTY	SAN JUAN	ETHANE	7.4
FIELD	BLANCO	PROPANE	2.5
WELL NAME	SAN JUAN 32-9 UNIT NO. 9A	N-BUTANE	0.7
API	3004529736	ISOBUTANE	0.4
LOCATION	SEC. 25, T32N, R10W	N-PENTANE	0.2
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.2
COMPLETED	991022	CYCLOPENTANE	--
SAMPLED	011002	HEXANES PLUS	0.3
FORMATION	CRET-MESAVERDE	NITROGEN	0.1
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	6102	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	497	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	2085	CARBON DIOXIDE	1.8
		HELIUM	0.05
		HEATING VALUE*	1,136
		SPECIFIC GRAVITY	0.664

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20851
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	VANDERSLICE NO. 1-B
API	3004530014
LOCATION	SEC. 19, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	000324
SAMPLED	011002
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5440
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	187
OPEN FLOW, MCFD	217

COMPONENT, MOLE PCT	
METHANE	85.6
ETHANE	7.8
PROPANE	2.7
N-BUTANE	0.7
ISOBUTANE	0.5
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.8
HELIUM	0.05
HEATING VALUE*	1,144
SPECIFIC GRAVITY	0.669

SAMPLE	20857
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	SAN JUAN 32-9 UNIT NO. 34A
API	3004522917
LOCATION	SEC. 35, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	780717
SAMPLED	011002
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5636
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	576
OPEN FLOW, MCFD	2779

COMPONENT, MOLE PCT	
METHANE	85.7
ETHANE	7.8
PROPANE	2.6
N-BUTANE	0.7
ISOBUTANE	0.5
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.8
HELIUM	0.05
HEATING VALUE*	1,140
SPECIFIC GRAVITY	0.667

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20859
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	SAN JUAN 32-9 UNIT NO. 9
API	3004511219
LOCATION	SEC. 25, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	610802
SAMPLED	011002
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5650
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	981
OPEN FLOW, MCFD	483

COMPONENT, MOLE PCT	
METHANE	85.2
ETHANE	7.9
PROPANE	2.8
N-BUTANE	0.8
ISOBUTANE	0.5
N-PENTANE	0.2
ISOPENTANE	0.3
CYCLOPENTANE	–
HEXANES PLUS	0.4
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.7
HELIUM	0.05
HEATING VALUE*	1,151
SPECIFIC GRAVITY	0.674

SAMPLE	20856
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	SCOTT NO. 5R
API	3004528519
LOCATION	SEC. 34, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	910904
SAMPLED	011002
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5635
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	550
OPEN FLOW, MCFD	18992

COMPONENT, MOLE PCT	
METHANE	84.3
ETHANE	8.5
PROPANE	3.0
N-BUTANE	0.8
ISOBUTANE	0.5
N-PENTANE	0.2
ISOPENTANE	0.3
CYCLOPENTANE	–
HEXANES PLUS	0.5
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.7
HELIUM	0.05
HEATING VALUE*	1,163
SPECIFIC GRAVITY	0.68

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20855	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	84.2
COUNTY	SAN JUAN	ETHANE	8.6
FIELD	BLANCO	PROPANE	3.0
WELL NAME	SCOTT NO. 5A	N-BUTANE	0.8
API	3004522547	ISOBUTANE	0.5
LOCATION	SEC. 34, T32N, R10W	N-PENTANE	0.2
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.3
COMPLETED	770913	CYCLOPENTANE	--
SAMPLED	011002	HEXANES PLUS	0.4
FORMATION	CRET-MESAVERDE	NITROGEN	0.2
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	5408	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	199	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	4933	CARBON DIOXIDE	1.7
		HELIUM	0.06
		HEATING VALUE*	1,166
		SPECIFIC GRAVITY	0.681

SAMPLE	20853	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	83.3
COUNTY	SAN JUAN	ETHANE	9.2
FIELD	BLANCO	PROPANE	3.3
WELL NAME	SCOTT NO. 7-A	N-BUTANE	0.9
API	3004521967	ISOBUTANE	0.6
LOCATION	SEC. 3, T31N, R10W	N-PENTANE	0.2
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.3
COMPLETED	760707	CYCLOPENTANE	--
SAMPLED	011002	HEXANES PLUS	0.4
FORMATION	CRET-MESAVERDE	NITROGEN	0.2
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	5337	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	705	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	4133	CARBON DIOXIDE	1.6
		HELIUM	0.06
		HEATING VALUE*	1,178
		SPECIFIC GRAVITY	0.688

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20668
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	HOWELL C NO. 3C
API	3004530009
LOCATION	SEC. 7, T30N, R8W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	000416
SAMPLED	010412
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5298
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	370
OPEN FLOW, MCFD	870

COMPONENT, MOLE PCT	
METHANE	83.4
ETHANE	9.1
PROPANE	3.8
N-BUTANE	1.0
ISOBUTANE	0.7
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.07
HEATING VALUE*	1,200
SPECIFIC GRAVITY	0.688

SAMPLE	20843
STATE	NEW MEXICO
COUNTY	SAN JUAN
FIELD	BLANCO
WELL NAME	HARRISON NO. 1-R
API	3004529533
LOCATION	SEC. 31, T32N, R10W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	980514
SAMPLED	011002
FORMATION	CRET-MESAVERDE
GEOLOGIC PROVINCE CODE	580
TRUE VERTICAL DEPTH (FT)	5786
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	317
OPEN FLOW, MCFD	1150

COMPONENT, MOLE PCT	
METHANE	82.3
ETHANE	9.1
PROPANE	3.7
N-BUTANE	1.1
ISOBUTANE	0.7
N-PENTANE	0.3
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	0.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.9
HELIUM	0.07
HEATING VALUE*	1,192
SPECIFIC GRAVITY	0.701

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20651	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	79.2
COUNTY	SAN JUAN	ETHANE	10.8
FIELD	BLANCO	PROPANE	5.0
WELL NAME	FLORANCE NO. 41	N-BUTANE	1.4
API	3004508105	ISOBUTANE	0.8
LOCATION	SEC. 21, T29N, R9W	N-PENTANE	0.4
OWNER	CONOCO, INC.	ISOPENTANE	0.4
COMPLETED	510806	CYCLOPENTANE	–
SAMPLED	010412	HEXANES PLUS	0.5
FORMATION	CRET-MESAVERDE	NITROGEN	0.4
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4694	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	1090	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	3120	CARBON DIOXIDE	1.1
		HELIUM	0.09
		HEATING VALUE*	1,246
		SPECIFIC GRAVITY	0.725

SAMPLE	20670	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	86.3
COUNTY	SAN JUAN	ETHANE	7.3
FIELD	BLANCO	PROPANE	2.7
WELL NAME	WOODRIVER NO. 2	N-BUTANE	0.7
API	3004513226	ISOBUTANE	0.5
LOCATION	SEC. 9, T30N, R8W	N-PENTANE	0.2
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.3
COMPLETED	560227	CYCLOPENTANE	–
SAMPLED	010412	HEXANES PLUS	0.4
FORMATION	CRET-MESAVERDE, MANCOS	NITROGEN	0.1
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4865	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	1055	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	11500	CARBON DIOXIDE	1.5
		HELIUM	0.05
		HEATING VALUE*	1,147
		SPECIFIC GRAVITY	0.665

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20868	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	78.0
COUNTY	SAN JUAN	ETHANE	8.7
FIELD	TOCITO DOME	PROPANE	3.5
WELL NAME	NAVAJO TRIBAL "N" NO. 11	N-BUTANE	1.1
API	3004520583	ISOBUTANE	0.6
LOCATION	SEC. 17, T26N, R18W	N-PENTANE	0.3
OWNER	ROBERT L. BAYLESS	ISOPENTANE	0.3
COMPLETED	700130	CYCLOPENTANE	--
SAMPLED	011003	HEXANES PLUS	0.5
FORMATION	PENN-PARADOX	NITROGEN	5.4
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	6390	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	271	CARBON DIOXIDE	1.1
		HELIUM	0.47
		HEATING VALUE*	1,137
		SPECIFIC GRAVITY	0.71

SAMPLE	20867	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	89.5
COUNTY	SAN JUAN	ETHANE	5.5
FIELD	BLANCO	PROPANE	1.6
WELL NAME	SAN JUAN NO. 39	N-BUTANE	0.4
API	3004511286	ISOBUTANE	0.3
LOCATION	SEC. 26, T32N, R10W	N-PENTANE	0.1
OWNER	BURLINGTON RESOURCES OIL & GAS CO	ISOPENTANE	0.2
COMPLETED	561017	CYCLOPENTANE	--
SAMPLED	011003	HEXANES PLUS	0.3
FORMATION	CRET-PICTURED CLIFFS	NITROGEN	0.1
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	6197	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	1022	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	12095	CARBON DIOXIDE	2.0
		HELIUM	0.03
		HEATING VALUE*	1,088
		SPECIFIC GRAVITY	0.638

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20854	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	89.6
COUNTY	SAN JUAN	ETHANE	5.5
FIELD	BLANCO	PROPANE	2.0
WELL NAME	SCOTT NO. 12	N-BUTANE	0.5
API	3004521822	ISOBUTANE	0.3
LOCATION	SEC. 3, T31N, R10W	N-PENTANE	0.1
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.1
COMPLETED	750925	CYCLOPENTANE	--
SAMPLED	011002	HEXANES PLUS	0.2
FORMATION	CRET-PICTURED CLIFFS	NITROGEN	0.1
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2806	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	944	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	2999	CARBON DIOXIDE	1.4
		HELIUM	0.04
		HEATING VALUE*	1,103
		SPECIFIC GRAVITY	0.637

SAMPLE	20862	COMPONENT, MOLE PCT	
STATE	NEW MEXICO	METHANE	88.8
COUNTY	SAN JUAN	ETHANE	6.2
FIELD	BLANCO	PROPANE	1.9
WELL NAME	SAN JUAN NO. 27	N-BUTANE	0.5
API	3004511314	ISOBUTANE	0.3
LOCATION	SEC. 23, T32N, R10W	N-PENTANE	0.1
OWNER	BURLINGTON RESOURCES OIL & GAS CO.	ISOPENTANE	0.2
COMPLETED	551111	CYCLOPENTANE	--
SAMPLED	011003	HEXANES PLUS	0.3
FORMATION	CRET-PICTURED CLIFFS	NITROGEN	0.1
GEOLOGIC PROVINCE CODE	580	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	6109	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	970	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	3400	CARBON DIOXIDE	1.7
		HELIUM	0.04
		HEATING VALUE*	1,104
		SPECIFIC GRAVITY	0.642

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20927
STATE	NEW MEXICO
COUNTY	SOCORRO
FIELD	WILDCAT
WELL NAME	DULCE DRAW STATE NO. 1
API	3005320014
LOCATION	SEC. 2, T4S, R9E
OWNER	PRIMERO OPERATING, INC.
COMPLETED	010431
SAMPLED	010808
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	465
TRUE VERTICAL DEPTH (FT)	2846
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	0.0
ETHANE	0.0
PROPANE	0.0
N-BUTANE	0.0
ISOBUTANE	0.0
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	8.3
OXYGEN	0.0
ARGON	0.2
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	91.4
HELIUM	0.09
HEATING VALUE*	0
SPECIFIC GRAVITY	1.472

SAMPLE	20873
STATE	NEW MEXICO
COUNTY	SOCORRO
FIELD	WILDCAT
WELL NAME	DULCE DRAW STATE NO. 1
API	3005320014
LOCATION	SEC. 2, T4S, R9E
OWNER	PRIMERO OPERATING, INC.
COMPLETED	010431
SAMPLED	010808
FORMATION	PERM-ABO
GEOLOGIC PROVINCE CODE	465
TRUE VERTICAL DEPTH (FT)	2650
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	200
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	0.8
ETHANE	0.0
PROPANE	0.0
N-BUTANE	0.0
ISOBUTANE	0.0
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	65.6
OXYGEN	0.0
ARGON	0.4
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	31.1
HELIUM	2.02
HEATING VALUE*	9
SPECIFIC GRAVITY	1.12

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20018
STATE	OHIO
COUNTY	HOCKING
FIELD	HAYNES
WELL NAME	AZBELL NO. 2
API	3407323485
LOCATION	SEC. 5N, SALT CREEK TWP
OWNER	COLUMBIA NATURAL RESOURCES, INC.
COMPLETED	980608
SAMPLED	981210
FORMATION	ORDO-ROSE RUN
GEOLOGIC PROVINCE CODE	160
TRUE VERTICAL DEPTH (FT)	3530
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1330
OPEN FLOW, MCFD	5700

COMPONENT, MOLE PCT	
METHANE	83.6
ETHANE	4.5
PROPANE	1.9
N-BUTANE	0.6
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	8.2
OXYGEN	0.4
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.16
HEATING VALUE*	1,017
SPECIFIC GRAVITY	0.649

SAMPLE	20046
STATE	OHIO
COUNTY	PORTAGE
FIELD	RAVENNA
WELL NAME	SHEWELL UNIT NO. P-11
API	3413324209
LOCATION	EDINBURG TWP, ATWATER QUAD, LOT 4SW
OWNER	EASTERN STATES OIL & GAS, INC.
COMPLETED	980924
SAMPLED	000211
FORMATION	ORDO-ROSE RUN, KNOX
GEOLOGIC PROVINCE CODE	160
TRUE VERTICAL DEPTH (FT)	7376
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	2550
OPEN FLOW, MCFD	1200

COMPONENT, MOLE PCT	
METHANE	88.5
ETHANE	6.6
PROPANE	2.7
N-BUTANE	0.8
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	0.7
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.04
HEATING VALUE*	1,139
SPECIFIC GRAVITY	0.641

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20726
STATE	OKLAHOMA
COUNTY	CUSTER
FIELD	WEATHERFORD
WELL NAME	CRALL NO. 12-1
API	3503920567
LOCATION	SEC. 12, T13N, R15W
OWNER	CHESAPEAKE OPERATING, INC.
COMPLETED	820322
SAMPLED	010711
FORMATION	PENN-ATOKA
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	12246
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	800
OPEN FLOW, MCFD	950

COMPONENT, MOLE PCT	
METHANE	75.8
ETHANE	13.4
PROPANE	6.3
N-BUTANE	1.4
ISOBUTANE	0.8
N-PENTANE	0.4
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.6
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.6
HELIUM	0.05
HEATING VALUE*	1,291
SPECIFIC GRAVITY	0.748

SAMPLE	20732
STATE	OKLAHOMA
COUNTY	CUSTER
FIELD	FAY E
WELL NAME	MILTON NO. 1-25
API	3503921581
LOCATION	SEC. 25, T15N, R14W
OWNER	MARSHALL OIL CORP.
COMPLETED	940904
SAMPLED	010711
FORMATION	PENN-ATOKA, MORROW
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	10766
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	4100
OPEN FLOW, MCFD	1000

COMPONENT, MOLE PCT	
METHANE	83.2
ETHANE	6.0
PROPANE	2.1
N-BUTANE	0.4
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	5.5
OXYGEN	1.2
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.8
HELIUM	0.03
HEATING VALUE*	1,049
SPECIFIC GRAVITY	0.662

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20705	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	88.8
COUNTY	CUSTER	ETHANE	6.0
FIELD	HAMMON E.	PROPANE	2.1
WELL NAME	WHITE NO. 1-13	N-BUTANE	0.4
API	3503921437	ISOBUTANE	0.4
LOCATION	SEC. 13, T13N, R20W	N-PENTANE	0.1
OWNER	APACHE CORP.	ISOPENTANE	0.2
COMPLETED	920928	CYCLOPENTANE	–
SAMPLED	010709	HEXANES PLUS	0.4
FORMATION	PENN-CHEROKEE	NITROGEN	0.3
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	13000	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	4633	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	785	CARBON DIOXIDE	1.1
		HELIUM	0.04
		HEATING VALUE*	1,121
		SPECIFIC GRAVITY	0.645

SAMPLE	20707	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	79.8
COUNTY	CUSTER	ETHANE	10.5
FIELD	HAMMON E.	PROPANE	5.0
WELL NAME	SMITH B21 NO. 2	N-BUTANE	1.4
API	3503921375	ISOBUTANE	0.8
LOCATION	SEC. 21, T14N, R20W	N-PENTANE	0.3
OWNER	CIMAREX ENERGY CO.	ISOPENTANE	0.4
COMPLETED	900409	CYCLOPENTANE	--
SAMPLED	010709	HEXANES PLUS	0.4
FORMATION	PENN-CHEROKEE	NITROGEN	0.4
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	12242	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	6517	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	700	CARBON DIOXIDE	1.0
		HELIUM	0.04
		HEATING VALUE*	1,238
		SPECIFIC GRAVITY	0.719

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20725
STATE	OKLAHOMA
COUNTY	CUSTER
FIELD	WEATHERFORD
WELL NAME	HORSE CREEK NO. 13-1
API	3503921652
LOCATION	SEC. 13, T13N, R15W
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	960805
SAMPLED	010711
FORMATION	PENN-CHEROKEE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	11330
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	3900
OPEN FLOW, MCFD	3822

COMPONENT, MOLE PCT	
METHANE	78.4
ETHANE	10.4
PROPANE	6.1
N-BUTANE	1.5
ISOBUTANE	0.7
N-PENTANE	0.5
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.6
NITROGEN	0.8
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.6
HELIUM	0.06
HEATING VALUE*	1,267
SPECIFIC GRAVITY	0.736

SAMPLE	20734
STATE	OKLAHOMA
COUNTY	CUSTER
FIELD	CLINTON S
WELL NAME	CLINTON NO. 13-31
API	3503920825
LOCATION	SEC. 31, T12N, R16W
OWNER	PETRO ENGINEERING, INC.
COMPLETED	821108
SAMPLED	010711
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	15472
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	9500
OPEN FLOW, MCFD	2025

COMPONENT, MOLE PCT	
METHANE	95.8
ETHANE	2.2
PROPANE	0.3
N-BUTANE	TRACE
ISOBUTANE	TRACE
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.3
HELIUM	0.03
HEATING VALUE*	1,019
SPECIFIC GRAVITY	0.582

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20728
STATE	OKLAHOMA
COUNTY	CUSTER
FIELD	CUSTER CITY E.
WELL NAME	DECKER NO. 1-23
API	3503920338
LOCATION	SEC. 23, T14N, R15W
OWNER	WARREN AMERICAN OIL CO.
COMPLETED	800709
SAMPLED	010711
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	12708
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	3000
OPEN FLOW, MCFD	1150

COMPONENT, MOLE PCT	
METHANE	87.9
ETHANE	6.7
PROPANE	2.4
N-BUTANE	0.5
ISOBUTANE	0.5
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.4
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.8
HELIUM	0.04
HEATING VALUE*	1,132
SPECIFIC GRAVITY	0.649

SAMPLE	20727
STATE	OKLAHOMA
COUNTY	CUSTER
FIELD	CUSTER CITY E.
WELL NAME	BLACK WOLF NO. 1-25
API	3503920485
LOCATION	SEC. 25, T14N, R15W
OWNER	WARREN AMERICAN OIL CO.
COMPLETED	811101
SAMPLED	010711
FORMATION	PENN-MORROW, SPRINGER
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	13016
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	408

COMPONENT, MOLE PCT	
METHANE	91.8
ETHANE	4.8
PROPANE	1.2
N-BUTANE	0.3
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	0.4
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.0
HELIUM	0.03
HEATING VALUE*	1,074
SPECIFIC GRAVITY	0.615

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20730
STATE	OKLAHOMA
COUNTY	CUSTER
FIELD	FAY E
WELL NAME	CATTLE 4-D NO. 1-24
API	3503920156
LOCATION	SEC. 24, T15N, R14W
OWNER	APACHE CORP.
COMPLETED	770616
SAMPLED	010711
FORMATION	PENN-MORROW, SPRINGER
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	10897
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	872

COMPONENT, MOLE PCT	
METHANE	83.1
ETHANE	8.6
PROPANE	4.1
N-BUTANE	1.1
ISOBUTANE	0.7
N-PENTANE	0.2
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	0.4
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.8
HELIUM	0.05
HEATING VALUE*	1,204
SPECIFIC GRAVITY	0.694

SAMPLE	20729
STATE	OKLAHOMA
COUNTY	CUSTER
FIELD	THOMAS S.
WELL NAME	HALLE NO. 1-7
API	3503920956
LOCATION	SEC. 7, T14N, R14W
OWNER	UNIT PETROLEUM CO.
COMPLETED	831004
SAMPLED	010711
FORMATION	PENN-RED FORK
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	10885
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	350
OPEN FLOW, MCFD	300

COMPONENT, MOLE PCT	
METHANE	87.3
ETHANE	6.8
PROPANE	2.7
N-BUTANE	0.7
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.04
HEATING VALUE*	1,145
SPECIFIC GRAVITY	0.656

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20731	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	83.7
COUNTY	CLUSTER	ETHANE	8.3
FIELD	FAY E	PROPANE	4.0
WELL NAME	KENT NO. 1-24	N-BUTANE	1.0
API	3503921461	ISOBUTANE	0.7
LOCATION	SEC. 24, T15N, R14W	N-PENTANE	0.2
OWNER	MARSHALL OIL CORP.	ISOPENTANE	0.4
COMPLETED	920821	CYCLOPENTANE	--
SAMPLED	010711	HEXANES PLUS	0.5
FORMATION	PENN-SPRINGER	NITROGEN	0.4
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	10990	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	4600	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1750	CARBON DIOXIDE	0.8
		HELIUM	0.05
		HEATING VALUE*	1,197
		SPECIFIC GRAVITY	0.69

SAMPLE	20721	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	84.1
COUNTY	DEWEY	ETHANE	8.8
FIELD	PUTNAM	PROPANE	3.3
WELL NAME	SHIRLEY NO. 1-22	N-BUTANE	0.8
API	3504321704	ISOBUTANE	0.5
LOCATION	SEC. 22, T17N, R18W	N-PENTANE	0.2
OWNER	EXOK, INC.	ISOPENTANE	0.3
COMPLETED	830802	CYCLOPENTANE	--
SAMPLED	010710	HEXANES PLUS	0.5
FORMATION	PENN-MORROW	NITROGEN	0.5
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	10750	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	3020	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD		CARBON DIOXIDE	1.0
		HELIUM	0.04
		HEATING VALUE*	1,175
		SPECIFIC GRAVITY	0.68

* CALCULATED GROSS BTU PER CU FT, DRY AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DUR NG SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20715	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	93.6
COUNTY	DEWEY	ETHANE	3.5
FIELD	NOBSCOT NW	PROPANE	0.9
WELL NAME	FRANS USA NO. 1	N-BUTANE	0.2
API	3504321760	ISOBUTANE	0.1
LOCATION	SEC. 10, T16N, R15W	N-PENTANE	0.1
OWNER	VERNON E. FAULCONER, INC.	ISOPENTANE	0.1
COMPLETED	830823	CYCLOPENTANE	--
SAMPLED	010710	HEXANES PLUS	0.2
FORMATION	PENN-MORROW	NITROGEN	0.2
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	10243	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	2245	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1297	CARBON DIOXIDE	1.0
		HELIUM	0.04
		HEATING VALUE*	1,058
		SPECIFIC GRAVITY	0.602

SAMPLE	20720	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	79.9
COUNTY	DEWEY	ETHANE	10.6
FIELD	PUTNAM	PROPANE	4.8
WELL NAME	SHIRLEY NO. 4-22	N-BUTANE	1.2
API	3504322517	ISOBUTANE	0.7
LOCATION	SEC. 22, T17N, R18W	N-PENTANE	0.4
OWNER	EXOK, INC.	ISOPENTANE	0.4
COMPLETED	960121	CYCLOPENTANE	--
SAMPLED	010710	HEXANES PLUS	0.5
FORMATION	PENN-MORROW	NITROGEN	0.5
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	10786	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	4000	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	377	CARBON DIOXIDE	1.0
		HELIUM	0.06
		HEATING VALUE*	1,233
		SPECIFIC GRAVITY	0.717

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20718
STATE	OKLAHOMA
COUNTY	DEWEY
FIELD	PUTNAM
WELL NAME	GORE UNIT NO. 1-23
API	3504320618
LOCATION	SEC. 23, T17N, R18W
OWNER	CONTINENTAL OPERATING CO.
COMPLETED	750923
SAMPLED	010710
FORMATION	PENN-OSWEGO
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	9248
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1506
OPEN FLOW, MCFD	1250

COMPONENT, MOLE PCT	
METHANE	80.6
ETHANE	10.4
PROPANE	4.5
N-BUTANE	1.2
ISOBUTANE	0.6
N-PENTANE	0.4
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.8
NITROGEN	0.5
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.05
HEATING VALUE*	1,239
SPECIFIC GRAVITY	0.716

SAMPLE	20722
STATE	OKLAHOMA
COUNTY	DEWEY
FIELD	PUTNAM
WELL NAME	FAIRCHILD A NO. 1
API	3504350100
LOCATION	SEC. 8, T17N, R19W
OWNER	CHESAPEAKE OPERATING, INC.
COMPLETED	640116
SAMPLED	010710
FORMATION	PENN-OSWEGO
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	9494
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	4128
OPEN FLOW, MCFD	3174

COMPONENT, MOLE PCT	
METHANE	71.1
ETHANE	14.5
PROPANE	7.9
N-BUTANE	2.1
ISOBUTANE	1.0
N-PENTANE	0.6
ISOPENTANE	0.6
CYCLOPENTANE	--
HEXANES PLUS	0.7
NITROGEN	0.7
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.9
HELIUM	0.05
HEATING VALUE*	1,355
SPECIFIC GRAVITY	0.795

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20724
STATE	OKLAHOMA
COUNTY	DEWEY
FIELD	PUTNAM
WELL NAME	GOVERNMENT-SPAID NO. 1-5
API	3504350098
LOCATION	SEC. 5, T17N, R19W
OWNER	CHESAPEAKE OPERATING, INC.
COMPLETED	630320
SAMPLED	010710
FORMATION	PENN-OSWEGO
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	9436
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	4372
OPEN FLOW, MCFD	5500

COMPONENT, MOLE PCT	
METHANE	76.5
ETHANE	11.9
PROPANE	5.9
N-BUTANE	1.7
ISOBUTANE	0.8
N-PENTANE	0.5
ISOPENTANE	0.5
CYCLOPENTANE	--
HEXANES PLUS	0.8
NITROGEN	0.6
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.8
HELIUM	0.07
HEATING VALUE*	1,292
SPECIFIC GRAVITY	0.753

SAMPLE	20719
STATE	OKLAHOMA
COUNTY	DEWEY
FIELD	PUTNAM
WELL NAME	COLLIER ESTATE NO. 1
API	3504320543
LOCATION	SEC. 21, T17N, R18W
OWNER	VERNON E. FAULCONER, INC.
COMPLETED	741117
SAMPLED	010710
FORMATION	PENN-TONKAWA
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	7826
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1585
OPEN FLOW, MCFD	387

COMPONENT, MOLE PCT	
METHANE	78.7
ETHANE	10.7
PROPANE	5.2
N-BUTANE	1.4
ISOBUTANE	0.7
N-PENTANE	0.4
ISOPENTANE	0.4
CYCLOPENTANE	--
HEXANES PLUS	0.8
NITROGEN	1.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.5
HELIUM	0.12
HEATING VALUE*	1,254
SPECIFIC GRAVITY	0.729

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20022
STATE	OKLAHOMA
COUNTY	KIOWA
FIELD	MOUNTAIN VIEW W
WELL NAME	HAWKINS NO. 1-13
API	3507521917
LOCATION	SEC. 13, T7N, R15W
OWNER	CIMAREX ENERGY CO.
COMPLETED	980616
SAMPLED	990111
FORMATION	PENN-SPRINGER (OVERTURNED)
GEOLOGIC PROVINCE CODE	350
TRUE VERTICAL DEPTH (FT)	11391
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	4250
OPEN FLOW, MCFD	31000

COMPONENT, MOLE PCT	
METHANE	98.3
ETHANE	1.0
PROPANE	0.2
N-BUTANE	TRACE
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.3
HELIUM	0.02
HEATING VALUE*	1,020
SPECIFIC GRAVITY	0.565

SAMPLE	20874
STATE	OKLAHOMA
COUNTY	LATIMER
FIELD	WILBURTON
WELL NAME	YOURMAN NO. 7-15
API	3507721167
LOCATION	SEC. 15, T5N, R18E
OWNER	BP AMERICA PRODUCTION CO.
COMPLETED	001003
SAMPLED	011011
FORMATION	PENN-CROMWELL 2
GEOLOGIC PROVINCE CODE	345
TRUE VERTICAL DEPTH (FT)	11462
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1770
OPEN FLOW, MCFD	1558

COMPONENT, MOLE PCT	
METHANE	94.4
ETHANE	0.6
PROPANE	TRACE
N-BUTANE	0.0
ISOBUTANE	0.0
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	0.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	4.6
HELIUM	0.04
HEATING VALUE*	968
SPECIFIC GRAVITY	0.603

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20788	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	72.6
COUNTY	LINCOLN	ETHANE	10.3
FIELD	RED MOUND W	PROPANE	5.4
WELL NAME	WILKERSON NO. 2-3	N-BUTANE	1.0
API	3508123598	ISOBUTANE	0.4
LOCATION	SEC. 3, T15N, R2E	N-PENTANE	0.1
OWNER	MARJO OPERATING CO., INC.	ISOPENTANE	0.1
COMPLETED	001115	CYCLOPENTANE	--
SAMPLED	010813	HEXANES PLUS	TRACE
FORMATION	DEVO-HUNTON	NITROGEN	9.2
GEOLOGIC PROVINCE CODE	355	OXYGEN	0.8
TRUE VERTICAL DEPTH (FT)		ARGON	0.0
MEASURED DEPTH	6276	HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	950	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1170	CARBON DIOXIDE	0.1
		HELIUM	0.09
		HEATING VALUE*	1,104
		SPECIFIC GRAVITY	0.722

SAMPLE	20409	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	81.8
COUNTY	MAJOR	ETHANE	8.6
FIELD	RINGWOOD	PROPANE	3.8
WELL NAME	FISHER NO. 6	N-BUTANE	1.4
API	3509323677	ISOBUTANE	0.5
LOCATION	SEC. 3, T20N, R10W	N-PENTANE	0.5
OWNER	ONEOK RESOURCES CO.	ISOPENTANE	0.4
COMPLETED	920625	CYCLOPENTANE	--
SAMPLED	001023	HEXANES PLUS	1.0
FORMATION	CAMO-ARBUCKLE	NITROGEN	1.2
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	9291	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD		CARBON DIOXIDE	0.8
		HELIUM	0.03
		HEATING VALUE*	1,222
		SPECIFIC GRAVITY	0.717

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20410
STATE	OKLAHOMA
COUNTY	MAJOR
FIELD	RINGWOOD
WELL NAME	FISHER NO. 4
API	3509320854
LOCATION	SEC. 3, T20N, R10W
OWNER	ONEOK RESOURCES CO.
COMPLETED	740321
SAMPLED	001023
FORMATION	DEVO-HUNTON
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	8086
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	4835

COMPONENT, MOLE PCT	
METHANE	73.6
ETHANE	11.7
PROPANE	5.8
N-BUTANE	2.5
ISOBUTANE	0.8
N-PENTANE	1.2
ISOPENTANE	0.7
CYCLOPENTANE	--
HEXANES PLUS	1.9
NITROGEN	1.3
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.4
HELIUM	0.06
HEATING VALUE*	1,372
SPECIFIC GRAVITY	0.811

SAMPLE	20411
STATE	OKLAHOMA
COUNTY	MAJOR
FIELD	AMES SE
WELL NAME	COLLEY NO. 2
API	3509320578
LOCATION	SEC. 10, T20N, R10W
OWNER	ONEOK RESOURCES CO.
COMPLETED	710917
SAMPLED	001023
FORMATION	DEVO-HUNTON
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	
MEASURED DEPTH	8344
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	60.7
ETHANE	16.8
PROPANE	10.1
N-BUTANE	4.0
ISOBUTANE	1.3
N-PENTANE	1.5
ISOPENTANE	0.9
CYCLOPENTANE	--
HEXANES PLUS	3.2
NITROGEN	1.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.1
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.3
HELIUM	0.10
HEATING VALUE*	1,587
SPECIFIC GRAVITY	0.949

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20412	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	83.2
COUNTY	MAJOR	ETHANE	8.1
FIELD	RINGWOOD	PROPANE	3.7
WELL NAME	FISHER NO. 1	N-BUTANE	1.4
API	3509320171	ISOBUTANE	0.6
LOCATION	SEC. 3, T20N, R10W	N-PENTANE	0.5
OWNER	ONEOK RESOURCES CO.	ISOPENTANE	0.4
COMPLETED	800508	CYCLOPENTANE	–
SAMPLED	001023	HEXANES PLUS	0.8
FORMATION	MISS-MISSISSIPPIAN LIME	NITROGEN	0.8
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	7748	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	380	CARBON DIOXIDE	0.7
		HELIUM	0.04
		HEATING VALUE*	1,212
		SPECIFIC GRAVITY	0.705

SAMPLE	20451	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	74.9
COUNTY	TEXAS	ETHANE	6.7
FIELD	GUYMON-HUGOTON	PROPANE	3.6
WELL NAME	LONG NO. B1	N-BUTANE	1.1
API	3513900489	ISOBUTANE	0.4
LOCATION	SEC. 12, T4N, R15E	N-PENTANE	0.3
OWNER	CONOCO, INC.	ISOPENTANE	0.2
COMPLETED	460425	CYCLOPENTANE	–
SAMPLED	001108	HEXANES PLUS	0.3
FORMATION	PERM-CHASE GROUP	NITROGEN	12.1
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2800	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	30919	CARBON DIOXIDE	0.1
		HELIUM	0.36
		HEATING VALUE*	1,050
		SPECIFIC GRAVITY	0.712

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20450
STATE	OKLAHOMA
COUNTY	TEXAS
FIELD	GUYMON-HUGOTON
WELL NAME	TARVER NO. 1
API	3513900488
LOCATION	SEC. 2, T4N, R15E
OWNER	CONOCO, INC.
COMPLETED	451130
SAMPLED	001108
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2775
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	383
OPEN FLOW, MCFD	31909

COMPONENT, MOLE PCT	
METHANE	74.8
ETHANE	6.7
PROPANE	3.7
N-BUTANE	1.1
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	12.1
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.36
HEATING VALUE*	1,051
SPECIFIC GRAVITY	0.713

SAMPLE	20740
STATE	OKLAHOMA
COUNTY	TEXAS
FIELD	GUYMON-HUGOTON
WELL NAME	TILGHMAN NO. 1
API	3513900567
LOCATION	SEC. 28, T1N, R13E
OWNER	XTO ENERGY, INC.
COMPLETED	480520
SAMPLED	010730
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2888
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	37
OPEN FLOW, MCFD	23

COMPONENT, MOLE PCT	
METHANE	73.8
ETHANE	6.6
PROPANE	3.7
N-BUTANE	1.1
ISOBUTANE	0.5
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	13.0
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.46
HEATING VALUE*	1,041
SPECIFIC GRAVITY	0.714

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20741
STATE	OKLAHOMA
COUNTY	TEXAS
FIELD	GUYMON-HUGOTON
WELL NAME	BURROWS GAS UNIT NO. 0-1
API	3513900560000
LOCATION	SEC. 20, T1N, R13E
OWNER	XTO ENERGY, INC.
COMPLETED	500116
SAMPLED	010730
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2756
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	36
OPEN FLOW, MCFD	40

COMPONENT, MOLE PCT	
METHANE	72.8
ETHANE	6.4
PROPANE	3.6
N-BUTANE	1.1
ISOBUTANE	0.5
N-PENTANE	0.3
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	14.2
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.49
HEATING VALUE*	1,025
SPECIFIC GRAVITY	0.716

SAMPLE	20882
STATE	OKLAHOMA
COUNTY	TEXAS
FIELD	GUYMON-HUGOTON
WELL NAME	STATE NO. 1-36
API	3513921142
LOCATION	SEC. 36, T1N, R12E
OWNER	CRAWLEY PETROLEUM CORP.
COMPLETED	781022
SAMPLED	011030
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2955
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	245

COMPONENT, MOLE PCT	
METHANE	71.2
ETHANE	6.3
PROPANE	3.6
N-BUTANE	1.1
ISOBUTANE	0.5
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	16.0
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.57
HEATING VALUE*	1,002
SPECIFIC GRAVITY	0.721

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20673
STATE	OKLAHOMA
COUNTY	TEXAS
FIELD	GUYMON-HUGOTON
WELL NAME	BUZZARD NO. G-1
API	3513901074
LOCATION	SEC. 20, T4N, R12E
OWNER	DONALD W. JACKSON
COMPLETED	521106
SAMPLED	010511
FORMATION	PERM-CHASE GROUP
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	2479
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	324
OPEN FLOW, MCFD	2020

COMPONENT, MOLE PCT	
METHANE	62.1
ETHANE	5.4
PROPANE	3.5
N-BUTANE	1.1
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	26.1
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.68
HEATING VALUE*	885
SPECIFIC GRAVITY	0.754

SAMPLE	20015
STATE	OKLAHOMA
COUNTY	TEXAS
FIELD	HOOKER N
WELL NAME	ALEX HILL NO. 34A
API	3513922835
LOCATION	SEC. 34, T6N, R17ECM
OWNER	RICKS EXPLORATION, INC.
COMPLETED	980207
SAMPLED	981201
FORMATION	PERM-COUNCIL GROVE
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	3162
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	600
OPEN FLOW, MCFD	1600

COMPONENT, MOLE PCT	
METHANE	78.2
ETHANE	5.0
PROPANE	1.7
N-BUTANE	0.4
ISOBUTANE	0.2
N-PENTANE	TRACE
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	13.4
OXYGEN	0.5
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.1
HELIUM	0.34
HEATING VALUE*	952
SPECIFIC GRAVITY	0.665

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20752	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	94.4
COUNTY	TEXAS	ETHANE	2.8
FIELD	RANGE SW.	PROPANE	1.1
WELL NAME	STEFFEN UNIT NO. 2	N-BUTANE	0.3
API	3513921220	ISOBUTANE	0.1
LOCATION	SEC. 19, T1N, R18E	N-PENTANE	0.1
OWNER	XTO ENERGY, INC.	ISOPENTANE	0.1
COMPLETED	790723	CYCLOPENTANE	--
SAMPLED	010731	HEXANES PLUS	0.2
FORMATION	PENN-MORROW	NITROGEN	0.6
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	7069	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	150	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	92	CARBON DIOXIDE	0.2
		HELIUM	0.11
		HEATING VALUE*	1,062
		SPECIFIC GRAVITY	0.596

SAMPLE	20749	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	77.8
COUNTY	TEXAS	ETHANE	8.1
FIELD	CAMRICK	PROPANE	6.7
WELL NAME	JOE MORRIS NO. 1-B	N-BUTANE	2.3
API	3513935526	ISOBUTANE	0.7
LOCATION	SEC. 30, T2N, R19E	N-PENTANE	0.7
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.5
COMPLETED	560111	CYCLOPENTANE	--
SAMPLED	010730	HEXANES PLUS	0.9
FORMATION	PENN-MORROW	NITROGEN	1.7
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	6542	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	1430	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	13300	CARBON DIOXIDE	0.6
		HELIUM	0.16
		HEATING VALUE*	1,285
		SPECIFIC GRAVITY	0.757

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20756	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	80.7
COUNTY	TEXAS	ETHANE	6.9
FIELD	CAMRICK	PROPANE	5.1
WELL NAME	GRAVES NO. B-1	N-BUTANE	1.8
API	3513900002	ISOBUTANE	0.6
LOCATION	SEC. 26, T2N, R18E	N-PENTANE	0.7
OWNER	CHESAPEAKE OPERATING, INC.	ISOPENTANE	0.2
COMPLETED	551214	CYCLOPENTANE	--
SAMPLED	010731	HEXANES PLUS	1.0
FORMATION	PENN-MORROW	NITROGEN	2.1
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	6457	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	1065	CARBON DIOXIDE	0.6
		HELIUM	0.20
		HEATING VALUE*	1,231
		SPECIFIC GRAVITY	0.727

SAMPLE	20883	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	78.9
COUNTY	TEXAS	ETHANE	8.0
FIELD	TEXHOMA N	PROPANE	4.2
WELL NAME	SERIGHT NO. 1-36	N-BUTANE	1.5
API	3513921971	ISOBUTANE	0.5
LOCATION	SEC. 36, T1N, R12E	N-PENTANE	0.6
OWNER	H & L OPERATING CO., LLP	ISOPENTANE	0.3
COMPLETED	850221	CYCLOPENTANE	--
SAMPLED	011030	HEXANES PLUS	0.7
FORMATION	PENN-MORROW	NITROGEN	5.0
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	6743	ARGON	0.0
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	160	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	456	CARBON DIOXIDE	0.3
		HELIUM	0.20
		HEATING VALUE*	1,176
		SPECIFIC GRAVITY	0.717

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20753
STATE	OKLAHOMA
COUNTY	TEXAS
FIELD	CAMRICK
WELL NAME	MURRAY NO. 1
API	3513921400
LOCATION	SEC. 34, T1N, R18E
OWNER	SPESS OIL CO.
COMPLETED	801030
SAMPLED	010731
FORMATION	PENN-MORROW
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	6690
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	825
OPEN FLOW, MCFD	1100

COMPONENT, MOLE PCT	
METHANE	91.0
ETHANE	2.6
PROPANE	1.1
N-BUTANE	0.2
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	4.1
OXYGEN	0.0
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.5
HELIUM	0.31
HEATING VALUE*	1,006
SPECIFIC GRAVITY	0.603

SAMPLE	50583
STATE	OKLAHOMA
COUNTY	TEXAS
FIELD	GUYMON S
WELL NAME	ELLIOTT NO. 2-2
API	3513923074
LOCATION	SEC 2, T2N, R15ECM
OWNER	REPUBLIC ENERGY, INC.
COMPLETED	000114
SAMPLED	000117
FORMATION	PENN-TORONTO
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	4332
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	3010

COMPONENT, MOLE PCT	
METHANE	67.3
ETHANE	7.7
PROPANE	4.9
N-BUTANE	1.5
ISOBUTANE	0.5
N-PENTANE	0.5
ISOPENTANE	0.3
CYCLOPENTANE	--
HEXANES PLUS	0.8
NITROGEN	16.2
OXYGEN	0.0
ARGON	--
HYDROGEN	0.0
HYDROGEN SULFIDE**	--
CARBON DIOXIDE	0.1
HELIUM	0.26
HEATING VALUE*	1,076
SPECIFIC GRAVITY	0.773

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	50584	COMPONENT, MOLE PCT	
STATE	OKLAHOMA	METHANE	69.4
COUNTY	TEXAS	ETHANE	7.4
FIELD	TEXHOMA N.	PROPANE	4.4
WELL NAME	OAKES 25 NO. 1	N-BUTANE	1.4
API	3513923078	ISOBUTANE	0.4
LOCATION	SEC 25, T2N, R12ECM	N-PENTANE	0.4
OWNER	EOG RESOURCES, INC.	ISOPENTANE	0.3
COMPLETED	991213	CYCLOPENTANE	--
SAMPLED	991229	HEXANES PLUS	0.5
FORMATION	PENN-TORONTO	NITROGEN	15.5
GEOLOGIC PROVINCE CODE	360	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	4414	ARGON	--
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG		HYDROGEN SULFIDE**	--
OPEN FLOW, MCFD	1050	CARBON DIOXIDE	0.1
		HELIUM	0.33
		HEATING VALUE*	1,052
		SPECIFIC GRAVITY	0.75

SAMPLE	20027	COMPONENT, MOLE PCT	
STATE	OREGON	METHANE	42.8
COUNTY	COLUMBIA	ETHANE	0.0
FIELD	MIST	PROPANE	TRACE
WELL NAME	LONGVIEW FIBRE (APATOSAUR)NO 33-22-7S	N-BUTANE	0.0
API	3600900338	ISOBUTANE	0.0
LOCATION	SEC 22, T7N, R5W	N-PENTANE	0.0
OWNER	ENERFIN RESOURCES	ISOPENTANE	0.0
COMPLETED	990210	CYCLOPENTANE	--
SAMPLED	990422	HEXANES PLUS	0.0
FORMATION	EOCE-CLARK, WILSON	NITROGEN	57.0
GEOLOGIC PROVINCE CODE	710	OXYGEN	0.2
TRUE VERTICAL DEPTH (FT)	3011	ARGON	TRACE
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	662	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD		CARBON DIOXIDE	TRACE
		HELIUM	0.01
		HEATING VALUE*	434
		SPECIFIC GRAVITY	0.791

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20702
STATE	PENNSYLVANIA
COUNTY	INDIANA
FIELD	CHERRY HILL
WELL NAME	TRACT 67 (ENGLE) NO. 2
API	3706332245
LOCATION	SEC B,BRUSH VALLEY 7.5QUAD,CHRY HILL TWP
OWNER	SK OPERATING, INC.
COMPLETED	990331
SAMPLED	010709
FORMATION	DEVO-WRRN,SPG.,BLTN,BRED
GEOLOGIC PROVINCE CODE	160
TRUE VERTICAL DEPTH (FT)	3085
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	990
OPEN FLOW, MCFD	1342

COMPONENT, MOLE PCT	
METHANE	94.0
ETHANE	3.0
PROPANE	0.5
N-BUTANE	0.1
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	--
HEXANES PLUS	TRACE
NITROGEN	2.0
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.2
HYDROGEN SULFIDE**	0.0
CARBON D OXIDE	TRACE
HELIUM	0.08
HEATING VALUE*	1,026
SPECIFIC GRAVITY	0.585

SAMPLE	20028
STATE	PENNSYLVANIA
COUNTY	LAWRENCE
FIELD	MERCER
WELL NAME	BYLER NO. 24
API	3707320183
LOCATION	SEC B,NEW CASTLE NORTH 7.5 QUAD
OWNER	ATLAS RESOURCES, INC.
COMPLETED	980308
SAMPLED	990419
FORMATION	SILU MEDINA, WHIRLPOOL
GEOLOGIC PROVINCE CODE	160
TRUE VERTICAL DEPTH (FT)	5988
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	800
OPEN FLOW, MCFD	810

COMPONENT, MOLE PCT	
METHANE	92.7
ETHANE	2.9
PROPANE	0.3
N-BUTANE	0.1
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	3.5
OXYGEN	0.4
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	TRACE
HELIUM	0.08
HEATING VALUE*	1,002
SPECIFIC GRAVITY	0.59

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY.
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20029	COMPONENT, MOLE PCT	
STATE	TENNESSEE	METHANE	79.4
COUNTY	CAMPBELL	ETHANE	8.3
FIELD	JELLICO MOUNTAIN	PROPANE	4.2
WELL NAME	ROBERT SHARP NO. 1	N-BUTANE	1.3
API	4101320178	ISOBUTANE	0.4
LOCATION	4-A-65E	N-PENTANE	0.2
OWNER	MILLER PETROLEUM INC.	ISOPENTANE	0.2
COMPLETED	981019	CYCLOPENTANE	--
SAMPLED	990511	HEXANES PLUS	0.3
FORMATION	MISS-MONTEAGLE	NITROGEN	5.0
GEOLOGIC PROVINCE CODE	160	OXYGEN	TRACE
TRUE VERTICAL DEPTH (FT)	1824	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.3
WELLHEAD PRESSURE, PSIG	300	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	300	CARBON DIOXIDE	0.1
		HELIUM	0.26
		HEATING VALUE*	1,154
		SPECIFIC GRAVITY	0.698

SAMPLE	50577	COMPONENT, MOLE PCT	
STATE	TEXAS	METHANE	54.4
COUNTY	CLAY	ETHANE	1.8
FIELD	BARBARA M	PROPANE	1.1
WELL NAME	MCCORMICK ED GRAF NO. 1	N-BUTANE	0.6
API	4207733802	ISOBUTANE	0.3
LOCATION	BLK 64, PCSL SUR, A-374	N-PENTANE	0.1
OWNER	PRODUCERS OPERATING CO., INC.	ISOPENTANE	0.2
COMPLETED	970731	CYCLOPENTANE	--
SAMPLED	981030	HEXANES PLUS	0.1
FORMATION	PENN-CISCO	NITROGEN	40.1
GEOLOGIC PROVINCE CODE	420	OXYGEN	--
TRUE VERTICAL DEPTH (FT)	1519	ARGON	--
MEASURED DEPTH		HYDROGEN	--
WELLHEAD PRESSURE, PSIG	400	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	412	CARBON DIOXIDE	0.1
		HELIUM	1.29
		HEATING VALUE*	660
		SPECIFIC GRAVITY	0.757

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20013
STATE	TEXAS
COUNTY	CROCKETT
FIELD	OZONA SW
WELL NAME	BEAN, VADA NO. 8-A
API	4210537930
LOCATION	SEC. 14, BLK M, GC&SF SUR, A-4607
OWNER	HARRISON INTERESTS LIMITED
COMPLETED	980212
SAMPLED	980928
FORMATION	DEVO-DEVONIAN, PENN-STRAWN
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	9444
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1089
OPEN FLOW, MCFD	4300

COMPONENT, MOLE PCT	
METHANE	95.0
ETHANE	1.5
PROPANE	0.3
N-BUTANE	0.1
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	–
HEXANES PLUS	TRACE
NITROGEN	0.9
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.0
HELIUM	0.04
HEATING VALUE*	1,004
SPECIFIC GRAVITY	0.592

SAMPLE	20919
STATE	TEXAS
COUNTY	CULBERSON
FIELD	FORD
WELL NAME	TEXAS PACIFIC LAND TRUST 23-1
API	4210932199
LOCATION	SEC. 23, BLK 58, T1, T&PRR SUR, A-2650
OWNER	CONOCO, INC.
COMPLETED	001012
SAMPLED	011101
FORMATION	PERM-WOLFCAMP M
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	12052
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	3800
OPEN FLOW, MCFD	520

COMPONENT, MOLE PCT	
METHANE	96.3
ETHANE	2.1
PROPANE	0.3
N-BUTANE	0.1
ISOBUTANE	0.1
N-PENTANE	TRACE
ISOPENTANE	TRACE
CYCLOPENTANE	–
HEXANES PLUS	TRACE
NITROGEN	0.8
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.3
HELIUM	0.01
HEATING VALUE*	1,025
SPECIFIC GRAVITY	0.576

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20789
STATE	TEXAS
COUNTY	HEMPHILL
FIELD	MENDOTA SE
WELL NAME	ROSS AA No. 9-71
API	4221132431
LOCATION	SEC. 71, BLK A-2, H&GN SUR, A-122
OWNER	CHEVRON U.S.A. INC.
COMPLETED	001121
SAMPLED	010814
FORMATION	PENN-MORROW U
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	13277
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	4225
OPEN FLOW, MCFD	6714

COMPONENT, MOLE PCT	
METHANE	95.4
ETHANE	0.9
PROPANE	0.1
N-BUTANE	TRACE
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	1.4
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.0
HELIUM	0.03
HEATING VALUE*	985
SPECIFIC GRAVITY	0.58

SAMPLE	20014
STATE	TEXAS
COUNTY	LOVING
FIELD	VERMEJO
WELL NAME	GRAYLING GAS UNIT NO. 1
API	4230130060
LOCATION	SEC. 68, BLK 1, W&NW SUR, A-920
OWNER	FOREST OIL CORP.
COMPLETED	980204
SAMPLED	981013
FORMATION	ORDO-ELLENBURGER
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	21004
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	3140
OPEN FLOW, MCFD	50491

COMPONENT, MOLE PCT	
METHANE	45.5
ETHANE	0.0
PROPANE	0.0
N-BUTANE	0.0
ISOBUTANE	0.0
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	1.1
OXYGEN	--
ARGON	--
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	53.2
HELIUM	0.03
HEATING VALUE*	461
SPECIFIC GRAVITY	1.078

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20772
STATE	TEXAS
COUNTY	POTTER
FIELD	TECOVAS CREEK
WELL NAME	MARSH RANCH 13-14, SEPARATOR, 2 INCH OF
API	4237531630
LOCATION	SEC. 14, BLK 21W, EL&RR SUR
OWNER	SUNLIGHT EXPLORATION, INC.
COMPLETED	010523
SAMPLED	010808
FORMATION	PERM-BROWN DOLOMITE
GEOLOGIC PROVINCE CODE	440
TRUE VERTICAL DEPTH (FT)	
MEASURED DEPTH	4991
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	200

COMPONENT, MOLE PCT	
METHANE	71.6
ETHANE	5.3
PROPANE	3.0
N-BUTANE	1.0
ISOBUTANE	0.5
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	–
HEXANES PLUS	0.6
NITROGEN	14.8
OXYGEN	0.0
ARGON	0.1
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.8
HELIUM	0.92
HEATING VALUE*	990
SPECIFIC GRAVITY	0.729

SAMPLE	20737
STATE	TEXAS
COUNTY	POTTER
FIELD	TECOVAS CREEK
WELL NAME	MARSH RANCH NO. 13-14, SEPARATOR GAS
API	4237531630
LOCATION	SEC. 14, BLK 21W, EL&RR SUR
OWNER	SUNLIGHT EXPLORATION, INC.
COMPLETED	010523
SAMPLED	010720
FORMATION	PERM-BROWN DOLOMITE
GEOLOGIC PROVINCE CODE	440
TRUE VERTICAL DEPTH (FT)	
MEASURED DEPTH	4991
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	200

COMPONENT, MOLE PCT	
METHANE	71.5
ETHANE	4.9
PROPANE	2.6
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	–
HEXANES PLUS	0.5
NITROGEN	15.7
OXYGEN	0.0
ARGON	0.1
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.6
HELIUM	1.00
HEATING VALUE*	970
SPECIFIC GRAVITY	0.724

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20773
STATE	TEXAS
COUNTY	POTTER
FIELD	TECOVAS CREEK
WELL NAME	MARSH RANCH 13-14, CASING ANULUS
API	4237531630
LOCATION	SEC. 14, BLK 21W, EL&RR SUR
OWNER	SUNLIGHT EXPLORATION, INC.
COMPLETED	010523
SAMPLED	010808
FORMATION	PERM-BROWN DOLOMITE
GEOLOGIC PROVINCE CODE	440
TRUE VERTICAL DEPTH (FT)	
MEASURED DEPTH	4991
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	200

COMPONENT, MOLE PCT	
METHANE	71.9
ETHANE	5.0
PROPANE	2.7
N-BUTANE	1.0
ISOBUTANE	0.4
N-PENTANE	0.3
ISOPENTANE	0.3
CYCLOPENTANE	–
HEXANES PLUS	0.2
NITROGEN	15.3
OXYGEN	0.0
ARGON	0.1
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.7
HELIUM	1.03
HEATING VALUE*	969
SPECIFIC GRAVITY	0.72

SAMPLE	20672
STATE	TEXAS
COUNTY	POTTER
FIELD	TECOVAS CREEK
WELL NAME	MARSH RANCH NO. 13-14
API	4237531630
LOCATION	SEC. 14, BLK 21W, EL&RR SUR
OWNER	SUNLIGHT EXPLORATION, INC.
COMPLETED	001025
SAMPLED	010424
FORMATION	PERM-BROWN DOLOMITE
GEOLOGIC PROVINCE CODE	440
TRUE VERTICAL DEPTH (FT)	3602
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	8

COMPONENT, MOLE PCT	
METHANE	72.0
ETHANE	4.7
PROPANE	2.4
N-BUTANE	0.8
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	–
HEXANES PLUS	0.4
NITROGEN	15.7
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	2.0
HELIUM	1.04
HEATING VALUE*	949
SPECIFIC GRAVITY	0.716

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20790
STATE	TEXAS
COUNTY	POTTER
FIELD	TECOVAS CREEK
WELL NAME	MARSH RANCH 13-14, GAS SEPARATOR
API	4237531630
LOCATION	SEC. 14, BLK 21W, EL&RR SUR
OWNER	SUNLIGHT EXPLORATION, INC.
COMPLETED	010523
SAMPLED	010824
FORMATION	PERM-BROWN DOLOMITE
GEOLOGIC PROVINCE CODE	440
TRUE VERTICAL DEPTH (FT)	
MEASURED DEPTH	4991
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	200

COMPONENT, MOLE PCT	
METHANE	73.1
ETHANE	4.8
PROPANE	2.4
N-BUTANE	0.8
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	15.7
OXYGEN	0.0
ARGON	0.1
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.1
HELIUM	1.05
HEATING VALUE*	949
SPECIFIC GRAVITY	0.702

SAMPLE	20610
STATE	TEXAS
COUNTY	POTTER
FIELD	BIVINS RANCH
WELL NAME	BIVINS RANCH 1-212
API	4237531359
LOCATION	SEC. 212, BLK 2, AB&M SUR
OWNER	SAND RIVER O & E, LLC
COMPLETED	900615
SAMPLED	010405
FORMATION	PERM-BROWN DOLOMITE
GEOLOGIC PROVINCE CODE	440
TRUE VERTICAL DEPTH (FT)	3467
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	64.3
ETHANE	3.6
PROPANE	1.4
N-BUTANE	0.4
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	24.4
OXYGEN	0.0
ARGON	0.1
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	3.9
HELIUM	1.49
HEATING VALUE*	783
SPECIFIC GRAVITY	0.733

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20841
STATE	TEXAS
COUNTY	POTTER
FIELD	BIVINS RANCH
WELL NAME	BIVINS RANCH 1-212
API	4237531359
LOCATION	SEC. 212, BLK 2, AB&M SUR
OWNER	SAND RIVER O & E, LLC
COMPLETED	900615
SAMPLED	010913
FORMATION	PERM-BROWN DOLOMITE
GEOLOGIC PROVINCE CODE	440
TRUE VERTICAL DEPTH (FT)	3467
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	
OPEN FLOW, MCFD	

COMPONENT, MOLE PCT	
METHANE	64.2
ETHANE	3.6
PROPANE	1.4
N-BUTANE	0.4
ISOBUTANE	0.2
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	24.5
OXYGEN	0.0
ARGON	0.2
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	3.7
HELIUM	1.50
HEATING VALUE*	783
SPECIFIC GRAVITY	0.733

SAMPLE	20842
STATE	TEXAS
COUNTY	POTTER
FIELD	BIVINS RANCH
WELL NAME	BIVINS RANCH 1A-212
API	4237531628
LOCATION	SEC. 212, BLK 2, AB&M SUR
OWNER	SAND RIVER O & E, LLC
COMPLETED	010103
SAMPLED	010913
FORMATION	PERM-BROWN DOLOMITE
GEOLOGIC PROVINCE CODE	440
TRUE VERTICAL DEPTH (FT)	
MEASURED DEPTH	5170
WELLHEAD PRESSURE, PSIG	18
OPEN FLOW, MCFD	43

COMPONENT, MOLE PCT	
METHANE	62.5
ETHANE	3.9
PROPANE	1.8
N-BUTANE	0.5
ISOBUTANE	0.3
N-PENTANE	0.1
ISOPENTANE	0.1
CYCLOPENTANE	--
HEXANES PLUS	0.1
NITROGEN	28.2
OXYGEN	0.0
ARGON	0.2
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.5
HELIUM	1.83
HEATING VALUE*	786
SPECIFIC GRAVITY	0.723

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20609	COMPONENT, MOLE PCT	
STATE	TEXAS	METHANE	62.5
COUNTY	POTTER	ETHANE	3.9
FIELD	BIVINS RANCH	PROPANE	1.8
WELL NAME	BIVINS RANCH 1A-212	N-BUTANE	0.5
API	4237531628	ISOBUTANE	0.3
LOCATION	SEC. 212, BLK 2, AB&M SUR	N-PENTANE	0.1
OWNER	SAND RIVER O & E, LLC	ISOPENTANE	0.1
COMPLETED	010103	CYCLOPENTANE	–
SAMPLED	010404	HEXANES PLUS	0.1
FORMATION	PERM-BROWN DOLOMITE	NITROGEN	28.4
GEOLOGIC PROVINCE CODE	440	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)		ARGON	0.1
MEASURED DEPTH	5170	HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	583	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	43	CARBON DIOXIDE	0.4
		HELIUM	1.87
		HEATING VALUE*	785
		SPECIFIC GRAVITY	0.722

SAMPLE	20523	COMPONENT, MOLE PCT	
STATE	TEXAS	METHANE	62.0
COUNTY	POTTER	ETHANE	3.9
FIELD	BIVINS RANCH	PROPANE	1.8
WELL NAME	BIVINS RANCH 1A-212	N-BUTANE	0.5
API	4237531628	ISOBUTANE	0.3
LOCATION	SEC. 212, BLK 2, AB&M SUR	N-PENTANE	0.1
OWNER	SAND RIVER O & E, LLC	ISOPENTANE	0.1
COMPLETED	001128	CYCLOPENTANE	–
SAMPLED	001219	HEXANES PLUS	0.1
FORMATION	PERM-BROWN DOLOMITE	NITROGEN	28.7
GEOLOGIC PROVINCE CODE	440	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3585	ARGON	0.2
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	18	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	43	CARBON DIOXIDE	0.5
		HELIUM	1.89
		HEATING VALUE*	781
		SPECIFIC GRAVITY	0.726

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20026
STATE	TEXAS
COUNTY	REEVES
FIELD	MI VIDA
WELL NAME	HUMPHREY UNIT NO. 2
API	4238932137
LOCATION	SEC. 4, BLK 4, H&GN SUR, A-5273
OWNER	TITAN RESOURCES I, INC.
COMPLETED	980605
SAMPLED	990300
FORMATION	PENN-ATOKA
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	14492
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	9300
OPEN FLOW, MCFD	6969

COMPONENT, MOLE PCT	
METHANE	97.8
ETHANE	0.6
PROPANE	0.1
N-BUTANE	TRACE
ISOBUTANE	0.0
N-PENTANE	TRACE
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	0.2
OXYGEN	0.0
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	1.3
HELIUM	TRACE
HEATING VALUE*	1,004
SPECIFIC GRAVITY	0.572

SAMPLE	20002
STATE	TEXAS
COUNTY	REEVES
FIELD	NINE MILE DRAW
WELL NAME	NINE MILE DRAW 135507 NO. 1
API	4238932104
LOCATION	SEC. 13, BLK 55, T7, T&P SUR, A-135
OWNER	BURLINGTON RESOURCES OIL & GAS CO.
COMPLETED	970218
SAMPLED	971001
FORMATION	SILU-FUSSELMAN, ORDO-MONTOYA
GEOLOGIC PROVINCE CODE	430
TRUE VERTICAL DEPTH (FT)	14358
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	4671
OPEN FLOW, MCFD	1696

COMPONENT, MOLE PCT	
METHANE	90.3
ETHANE	0.9
PROPANE	0.1
N-BUTANE	0.0
ISOBUTANE	TRACE
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	0.0
HEXANES PLUS	0.0
NITROGEN	0.6
OXYGEN	TRACE
ARGON	0.0
HYDROGEN	TRACE
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	8.1
HELIUM	0.01
HEATING VALUE*	934
SPECIFIC GRAVITY	0.641

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20009	COMPONENT, MOLE PCT	
STATE	TEXAS	METHANE	72.2
COUNTY	STEPHENS	ETHANE	7.6
FIELD	WINSLOW	PROPANE	4.8
WELL NAME	GREEN NO. 1	N-BUTANE	1.2
API	4242935658	ISOBUTANE	0.4
LOCATION	P. SAMPSON SUR. A-161	N-PENTANE	0.3
OWNER	TEXAS UNITED GEOPRODUCTION, INC.	ISOPENTANE	0.3
COMPLETED	970917	CYCLOPENTANE	--
SAMPLED	980525	HEXANES PLUS	0.3
FORMATION	PENN-CADDO	NITROGEN	12.4
GEOLOGIC PROVINCE CODE	425	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	3448	ARGON	0.2
MEASURED DEPTH		HYDROGEN	TRACE
WELLHEAD PRESSURE, PSIG	1280	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	3060	CARBON DIOXIDE	0.3
		HELIUM	0.23
		HEATING VALUE*	1,085
		SPECIFIC GRAVITY	0.736

SAMPLE	20024	COMPONENT, MOLE PCT	
STATE	TEXAS	METHANE	81.4
COUNTY	TERRELL	ETHANE	8.8
FIELD	K M	PROPANE	4.8
WELL NAME	MITCHELL STATE 10 NO. 4	N-BUTANE	1.6
API	4244330781	ISOBUTANE	0.6
LOCATION	SEC. 10, BLK 1,CCSD&RGNG SUR.A-1677	N-PENTANE	0.3
OWNER	ENRON OIL & GAS CO.	ISOPENTANE	0.4
COMPLETED	980712	CYCLOPENTANE	--
SAMPLED	990206	HEXANES PLUS	0.8
FORMATION	PERM-WOLFCAMP	NITROGEN	0.8
GEOLOGIC PROVINCE CODE	430	OXYGEN	0.2
TRUE VERTICAL DEPTH (FT)	11462	ARGON	0.0
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	4800	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	10900	CARBON DIOXIDE	0.5
		HELIUM	0.01
		HEATING VALUE*	1,245
		SPECIFIC GRAVITY	0.718

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20023
STATE	TEXAS
COUNTY	WHEELER
FIELD	MILLS RANCH
WELL NAME	BRYANT NO. 2-44
API	4248331513
LOCATION	SEC. 44, BLK A-7, H&GN SUR, A-738
OWNER	CHEVRON USA, INC.
COMPLETED	980505
SAMPLED	990127
FORMATION	PENN-GRANITE WASH
GEOLOGIC PROVINCE CODE	360
TRUE VERTICAL DEPTH (FT)	12094
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	1200
OPEN FLOW, MCFD	1200

COMPONENT, MOLE PCT	
METHANE	78.5
ETHANE	11.9
PROPANE	5.4
N-BUTANE	1.3
ISOBUTANE	0.6
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.2
NITROGEN	1.0
OXYGEN	TRACE
ARGON	0.0
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.7
HELIUM	0.03
HEATING VALUE*	1,237
SPECIFIC GRAVITY	0.719

SAMPLE	20836
STATE	UTAH
COUNTY	SAN JUAN
FIELD	HOOK AND LADDER
WELL NAME	HUSKY FEDERAL NO. 15-25
API	4303730317
LOCATION	SEC. 25, T29S, R23E
OWNER	TOM BROWN, INC.
COMPLETED	770412
SAMPLED	010829
FORMATION	MISS-LEADVILLE
GEOLOGIC PROVINCE CODE	585
TRUE VERTICAL DEPTH (FT)	9080
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	3171
OPEN FLOW, MCFD	5000

COMPONENT, MOLE PCT	
METHANE	34.0
ETHANE	3.6
PROPANE	1.6
N-BUTANE	0.7
ISOBUTANE	0.4
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.3
NITROGEN	36.4
OXYGEN	0.0
ARGON	0.2
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.2
CARBON DIOXIDE	20.9
HELIUM	1.28
HEATING VALUE*	518
SPECIFIC GRAVITY	0.969

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	50578
STATE	UTAH
COUNTY	UINTAH
FIELD	WONSITS VALLEY
WELL NAME	WONSITS VALLEY FED. NO. 14
API	4304733070
LOCATION	SEC. 12, T8S, R21E
OWNER	CHEVERON USA
COMPLETED	980518
SAMPLED	990120
FORMATION	EOCE-WASATCH
GEOLOGIC PROVINCE CODE	575
TRUE VERTICAL DEPTH (FT)	7600
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	273
OPEN FLOW, MCFD	1170

COMPONENT, MOLE PCT	
METHANE	91.4
ETHANE	3.9
PROPANE	1.3
N-BUTANE	0.4
ISOBUTANE	0.3
N-PENTANE	0.2
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	1.6
NITROGEN	0.7
OXYGEN	0.0
ARGON	--
HYDROGEN	--
HYDROGEN SULFIDE**	--
CARBON DIOXIDE	0.2
HELIUM	--
HEATING VALUE*	1,148
SPECIFIC GRAVITY	0.646

SAMPLE	20020
STATE	WYOMING
COUNTY	LINCOLN
FIELD	EMIGRANT SPRINGS
WELL NAME	COUNTY LINE NO. 11-19
API	4902321259
LOCATION	SEC. 19, T23N, R111W
OWNER	MARATHON OIL CO.
COMPLETED	981229
SAMPLED	980126
FORMATION	CRET-FRONTIER
GEOLOGIC PROVINCE CODE	535
TRUE VERTICAL DEPTH (FT)	10496
MEASURED DEPTH	
WELLHEAD PRESSURE, PSIG	640
OPEN FLOW, MCFD	490

COMPONENT, MOLE PCT	
METHANE	79.9
ETHANE	12.0
PROPANE	4.3
N-BUTANE	0.7
ISOBUTANE	0.6
N-PENTANE	0.1
ISOPENTANE	0.2
CYCLOPENTANE	--
HEXANES PLUS	0.5
NITROGEN	1.0
OXYGEN	0.1
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE**	0.0
CARBON DIOXIDE	0.6
HELIUM	TRACE
HEATING VALUE*	1,220
SPECIFIC GRAVITY	0.705

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

TABLE 1. - SAMPLES FROM GAS AND OIL WELLS IN THE UNITED STATES

SAMPLE	20010	COMPONENT, MOLE PCT	
STATE	WYOMING	METHANE	89.8
COUNTY	PARK	ETHANE	5.3
FIELD	OREGON BASIN NORTH	PROPANE	1.8
WELL NAME	PAULINE NO. 7	N-BUTANE	0.5
API	4902905708	ISOBUTANE	0.3
LOCATION	SEC. 5, T51N, R100W	N-PENTANE	0.1
OWNER	MARATHON OIL CO.	ISOPENTANE	0.2
COMPLETED	970728	CYCLOPENTANE	--
SAMPLED	980610	HEXANES PLUS	0.2
FORMATION	TRIA-CHUGWATER	NITROGEN	1.7
GEOLOGIC PROVINCE CODE	520	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2408	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	450	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	850	CARBON DIOXIDE	0.1
		HELIUM	0.02
		HEATING VALUE*	1,101
		SPECIFIC GRAVITY	0.629

SAMPLE	20011	COMPONENT, MOLE PCT	
STATE	WYOMING	METHANE	90.0
COUNTY	PARK	ETHANE	4.7
FIELD	OREGON BASIN SOUTH	PROPANE	1.4
WELL NAME	LADY NO. 24	N-BUTANE	0.4
API	4902906866	ISOBUTANE	0.2
LOCATION	SEC. 31, T51N, R100W	N-PENTANE	0.1
OWNER	MARATHON OIL CO.	ISOPENTANE	0.1
COMPLETED	970321	CYCLOPENTANE	--
SAMPLED	980610	HEXANES PLUS	0.2
FORMATION	TRIA-CHUGWATER	NITROGEN	2.7
GEOLOGIC PROVINCE CODE	520	OXYGEN	0.0
TRUE VERTICAL DEPTH (FT)	2868	ARGON	0.1
MEASURED DEPTH		HYDROGEN	0.0
WELLHEAD PRESSURE, PSIG	450	HYDROGEN SULFIDE**	0.0
OPEN FLOW, MCFD	325	CARBON DIOXIDE	0.1
		HELIUM	0.04
		HEATING VALUE*	1,074
		SPECIFIC GRAVITY	0.622

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY
** DUE TO THE ABSORPTION OF H2S DURING SAMPLING, THE REPORTED RESULTS MAY NOT BE RELIABLE

Table 2

Samples from Natural Gas Pipelines in the United States

TABLE 2. - SAMPLES FROM PIPELINES IN THE UNITED STATES

SAMPLE	20006
STATE	COLORADO
COUNTY	LAS ANIMAS
FIELD	SPANISH PEAK
PLANT	EVERGREEN COMP. STATION
LOCATION	24" INLET
OWNER	EVERGREEN OPERATING CORP.
SAMPLED	980317
FORMATION	TERT-RATON,CRET-VERMEJO
GEOLOGIC PROVINCE CODE	455
PRESSURE, PSIG	20
FLOW, MCFD	28000

COMPONENT, MOLE PCT	
METHANE	98.9
ETHANE	0.0
PROPANE	0.0
N-BUTANE	0.0
ISOBUTANE	0.0
N-PENTANE	0.0
ISOPENTANE	0.0
CYCLOPENTANE	--
HEXANES PLUS	0.0
NITROGEN	0.4
OXYGEN	0.0
ARGON	TRACE
HYDROGEN	0.0
HYDROGEN SULFIDE	0.0
CARBON DIOXIDE	0.8
HELIUM	TRACE
HEATING VALUE*	1,002
SPECIFIC GRAVITY	0.563

* CALCULATED GROSS BTU PER CU FT, DRY, AT 60 DEGREES FAHRENHEIT AND 30 INCHES OF MERCURY

Previous Publications in the Helium Survey Series

1. Anderson, C.C., and H.H. Hinson. Helium-Bearing Natural Gases of the United States. Analyses and Analytical Methods. BuMines Bulletin 486, 1951, 141 pp.

2. Boone, W.J., Jr. Helium-Bearing Natural Gases of the United States. Analyses and Analytical Methods. Supplement to Bulletin 486. BuMines Bulletin 576, 1958, 117pp.

3. Munnerlyn, R.D., and R.D. Miller. Helium-Bearing Natural Gases of the United States: Analyses. Second Supplement to Bulletin 486. BuMines Bulletin 617, 1963, 93pp.

4. Miller, R.D., and G.P. Norrell. Analyses of Natural Gases of the United States, 1961. BuMines IC 8221, 1964, 148 pp.

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40. Sigler, Stella M. Analyses of Natural Gases, 1993. BuMines IC 9400, 1994, 58pp.

41. Hamak, J.E., and D.L. Driskill. Analyses of Natural Gases, 1994–95. Bureau of Land Management, Technical Note 399, 1996, 68 pp.

42. Gage, B.D., and D.L. Driskill. Analyses of Natural Gases, 1996–1997. Bureau of Land Management, Technical Note 404, 1998, 71 pp.